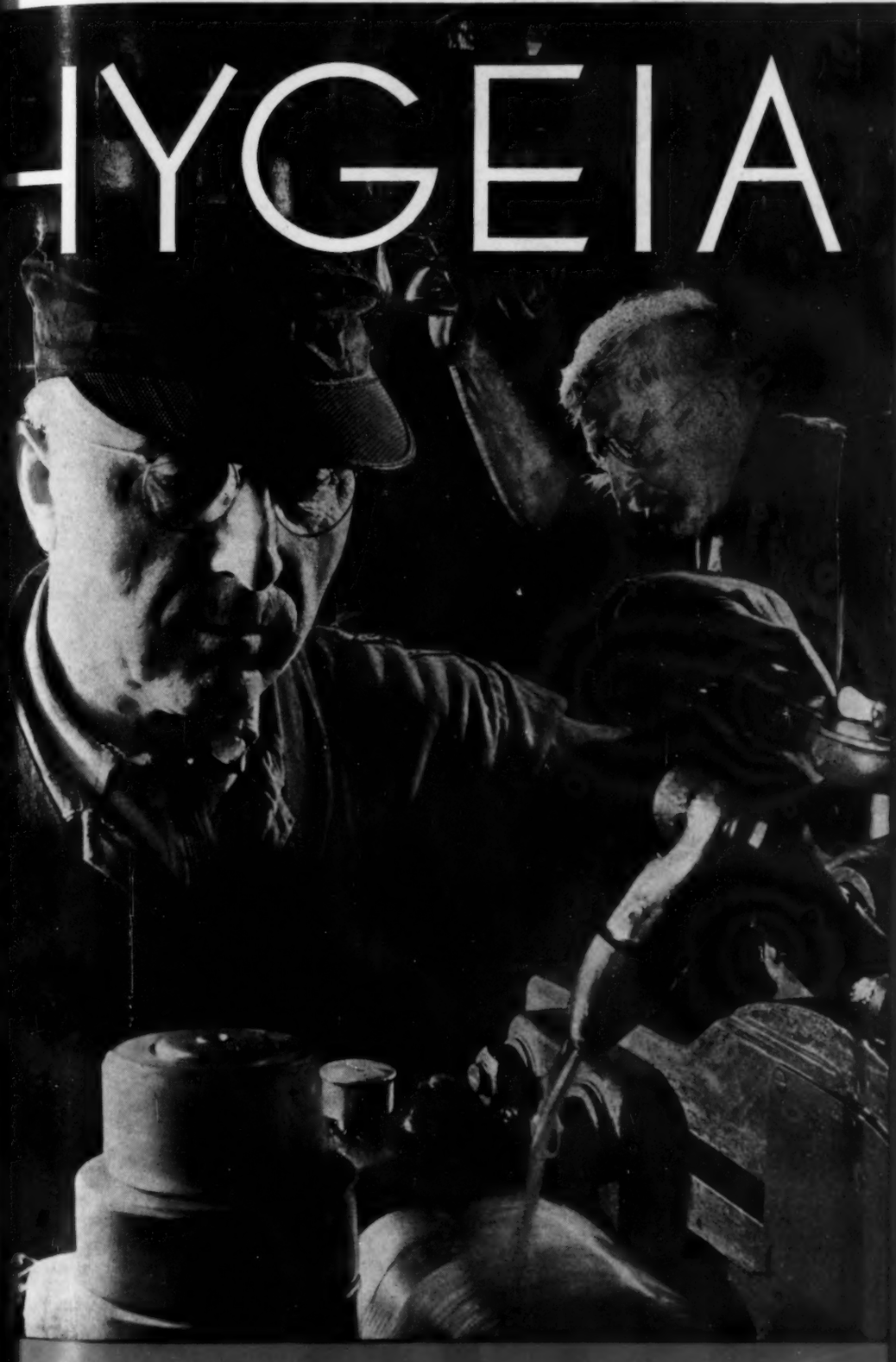
Medical Library
MAY 20 1943

THE HEALTH MAGAZINE
OF THE AMERICAN MEDICAL ASSOCIATION

HYGEIA



MAY
1943-25c

FIVE BILLION DAYS OFF
By Jocelyn Tyler

TIRED EYES
By Conrad Berens, M.D.

NAIL CARE
By Herman Goodman, M.D.

FLYING DOCTORS
By A. C. H. Parkins

NURSES AND THOSE THEY SERVE
By Alma Primmer

THE OVERSOLICITOUS MOTHER
By Frank Howard Richardson, M.D.

WE WON'T STARVE
By Phoebe Mayo Walker

THE FOOD WE EAT
By Miriam Zeller Ogden

FACTORS IN NUTRITION
By Amalia Lanza, Ph.D.

E OLDER WORKER

By Anton J. Carlson, Ph.D.

What the industrial worker past 50 or 60 lacks in physical vigor he may make up in skill, experience and judgment.

It took Total War to open Pat's eyes

1 Ever since the big plant went into war production, Pat's gone all-out for victory —worked harder, longer. *But now . . .*

2 Something is going wrong. Before noon her eyes begin to strain, tire, fog. The going gets tougher and tougher. *And . . .*

3 By three her head aches and she's all in, jittery, on the edge of nervous exhaustion, ready to quit. *Then one day . . .*

4 The boss calls her down for making mistakes. "This is War," he says—"mistakes cost lives and we won't tolerate them."

5 That's the last straw. Pat goes to pieces. "I can't stand this grind," she wails—"It's ruining my eyes and tiring me out."

6 "You mean," retorts the boss, *"you're* ruining your eyes by *neglecting* them! That's what's tiring you out. Now look here . . .

7 "You go right over to one of the good eyesight specialists in town and have your eyes examined. Scat!"

8 "Wise girl! Now you'll see easily and well. No more fumbling and mistakes—no more eye-strain jitters for you!"

9 *"THIS IS THE LIFE!* Have I got see-power and pep now! Look . . . five o'clock and still going like a breeze. Guess I'll take Bill up on that movie tonight."

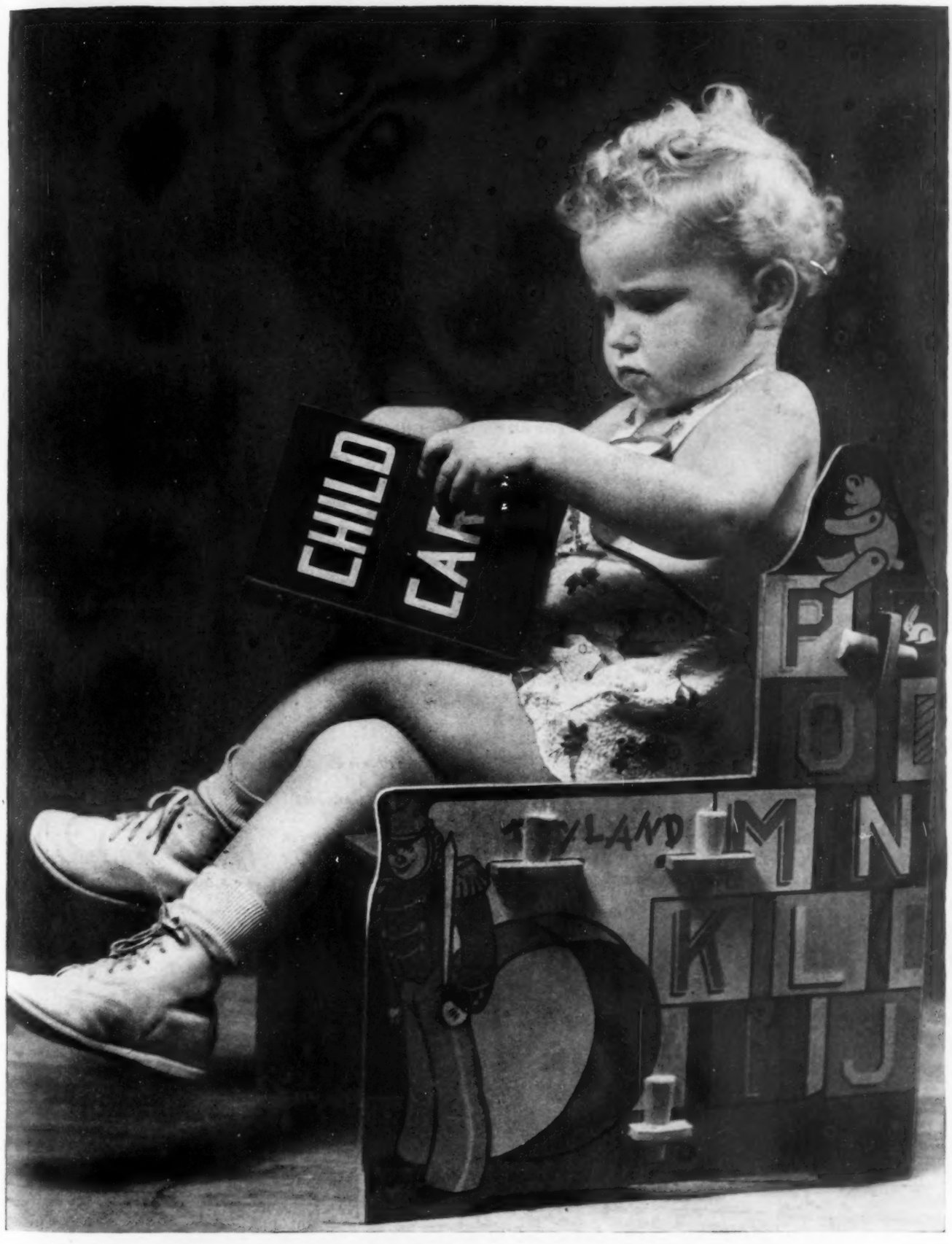
YOUR EYES control 80% of your motions and convey 83% of the knowledge that reaches your brain. It is always foolish to neglect them. Today it's a betrayal of the boys on the fighting fronts. Have your eyes examined—and don't take chances on slipshod service. Get the best. Professional analysis will determine their true condition. If correction is called for, scientific care and skill will sharpen your vision for its patriotic job.

VISION FOR VICTORY

BETTER VISION INSTITUTE, INC., 630 FIFTH AVE., NEW YORK

Copyright, 1943, Better Vision Institute, Inc.

This announcement also appears in The Saturday Evening Post, Collier's, American Weekly and the American Magazine



BABIES SUPERVISED BY PHYSICIANS ARE BETTER BABIES

Copyright, 1943, Mead Johnson & Company, Evansville, Indiana, U. S. A.

EDWARD JENNER *1749-1823*

Introduced preventive inoculation

hygeia

THE HEALTH MAGAZINE

535 N. DEARBORN ST., CHICAGO, ILL.

Published and copyrighted, 1943, by the American Medical Association. Edited by Morris Fishbein, M.D.

MAY

COVER ..... Ewing Galloway

BOOKS ON HEALTH 326

OLIVER WENDELL HOLMES, M.D. R. M. Cunningham Jr. 328

THE HEALTH PROBLEMS OF INDUSTRY ..... An Editorial by Morris Fishbein 334

NURSES AND THOSE THEY SERVE ..... Aline Trimble 335

THE OLDER WORKER ..... Anton J. Carlson, Ph.D. 338

TIRED EYES ..... Conrad Berens, M.D. 340

THE CONTROL OF TUBERCULOSIS ..... J. Arthur Myers, M.D., and Virginia L. Dustin 342

CIVILIAN FITNESS ..... Arlie V. Bock, M.D. 344

FIVE BILLION DAYS OFF ..... Jocelyn Wallace Tyler 347

FACTORS IN NUTRITION ..... Amalia Lautz, Ph.D. 348

WHAT'S A HAIR'S BREADTH? ..... S. R. Winters 350

FLYING DOCTORS ..... A. C. H. Purthrey 352

NAIL CARE ..... Herman Goodman, M.D. 354

ARMY SAFETY ENGINEERS ..... E. M. Hockensmith 356

FOODS AND NUTRITION:

The Food We Eat: III ..... Miriam Zeller Gross 358

We Won't Starve ..... Phoebe Mayo Walters 364

QUESTIONS AND ANSWERS 372

CHILD CARE:

The Oversolicitous Mother ..... Frank Howard Richardson, M.D. 384

TEACHING HEALTH:

Your Child's Hearing ..... Veronica B. McKinny, R.N. 393

BLOOD DONOR—A POEM ..... Carrie Fall Benson 396

MEDICAL NEWS 400

Vol. 21 **1943** No. 5

HYGEIA The Health Magazine, is published monthly by the American Medical Association, 535 N. Dearborn Street, Chicago, Ill. Yearly subscription price, $2.50; for foreign postage add 75 cents. Single copies, 25 cents. Volume 21, Number 5. Entered as second-class matter March 21, 1923, at the postoffice at Chicago, Ill., under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1,103 Act of October 3, 1917, authorized March 21, 1923. Printed in U. S. A.

Unsolicited manuscripts will be considered by the Editor but must be accompanied by a stamped self addressed envelop to insure return if rejected. Manuscripts should be typewritten, double-spaced, and the original, not the carbon copy, submitted. All rights reserved.

What can a man believe in?

It wasn't hard to learn. Only twenty-nine words. At first you didn't quite understand them all—"allegiance," for instance, and "one nation indivisible." Yet, as you stood up with the rest of your class and recited the pledge to the Flag, 'way down deep inside you felt important. Remember? And proud!

You know the full meaning of that pledge now. It's back of every War Bond you buy. It goes with every dollar you give the Red Cross and the U.S.O. It means sacrifice of time and comfort as you work with your neighbors for civilian defense. It may mean parting for awhile with someone you hold most dear.

"I pledge allegiance to the Flag of the United States." Say it over to yourself tomorrow morning, as the boys and girls in our schools pledge themselves again *"to the Republic for which it stands. One Nation indivisible, with liberty and justice for all."* That's something you can believe in—always!

Every Squibb product—whether made especially for prescription by the medical profession or for proper everyday use in the home—bears an individual control number. It means that each detail in the product's making has been checked against Squibb's high standards and recorded under that number at the Squibb Laboratories. Look for the name and control number when you buy. You can believe in Squibb.

E·R·SQUIBB & SONS

Manufacturing Chemists to the Medical Profession Since 1858

THE PRICELESS INGREDIENT OF EVERY PRODUCT IS THE HONOR AND INTEGRITY OF ITS MAKER

Copr. 1943, by E. R. Squibb & Sons

"The Adcomber"

looks at Hygeia ads

Swift tragedy can come to babies falling from high chairs—but the youngster who owns a Babee-Tenda Safety Chair is protected from such accidents. For Babee-Tenda is secure, convenient for eating and play, for indoors and out. Have you seen it? Then turn to page 395!

Do you think before you fret at the doctor's delay? Before you take risks that can result in colds? indigestion? accidents? YOU CAN HELP your doctor to make both ends meet on that crowded schedule of his . . . That will help all the folks in your town—including yourself! (Page 369.)

For legs of unequal length (even as much as an inch and a half!) "Elevators" shoes tactfully conceal unevenness—improve appearance. A help, also, for feet of unequal size. A FREE BOOKLET on "Elevators" is sent on request . . . use the coupon, page 372.

You can erase this worry from your mind—What will I do for a figure support when rubber runs out? Spirella garments do not depend on rubber to do their work—yet they do it well! You can get an idea HOW WELL from the test on page 391.

Not coffee—not tea—not a substitute for anything—but a rich, full-bodied, satisfying drink in its own right . . . Have you tried Postum recently? (Anyway, do treat yourself to a look at the man who *did* try it, page 370.)

Remember the days when you could walk into your grocery and say, "I'll take a can of that delicious Dole Pineapple," and get it — just like that? As you doubtless know, three-quarters of our present pack is going to war. But just see what is being prepared for you after! . . . (Picture, page 330.)

It can happen to you!—real hair to groom the head which has ceased to grow its own. For Max Factor individually styled hairpieces are performing many miracles like that pictured on page 383 . . . *You'll like* the way we handle your inquiry, or your order.

Here's a nursing bottle that can take it—from cold to heat in a jiffy, and never the worse for the temperature shock. The reason?—it's Pyrex! Note too, on page 394, the efficient little device to help prevent colic.

Ulcer trouble? Like to learn the right way to live, take care of yourself better, regulate your diet? . . . Then this authoritative new book is for you—"Understand Your Ulcer." More and important facts about it, page 374.

THE ADCOMBER

Who's Who

IN

HYGEIA

ANTON J. CARLSON, Ph.D., who explains the physiology of aging in an important article on "The Older Worker" in this issue of HYGEIA (page 338), is professor of physiology and chairman emeritus of the department at the University of Chicago, where he has been teaching physiology for the past forty years. Remembered by thousands who have been his students as an inspiring teacher and an uncompromising scientist, Dr. Carlson has added measurably to man's knowledge of man by his research in, among other fields, circulation, the heart and heart nerves, lymph and lymph formations, saliva and its secretion, thyroids and parathyroids, gastric secretions, metabolism and the physiology of hunger.

Dr. Carlson came to this country from Sweden as a boy of 16 in 1891. He took his undergraduate training and master's degree at Augustana College and his Ph.D. at Leland Stanford University, where he remained for a year as an assistant in physiology. After a year of similar work at Carnegie Institute he went to the University of Chicago in 1904. In 1917, he went to France with the American Expeditionary Forces as a lieutenant colonel in the Sanitary Corps. He has attended several assemblies abroad of the International Congress on Physiology.

By any standard, Dr. Carlson is one of the world's great contemporary scientists. His article in HYGEIA this month—which clarifies the status of the older worker in industry, a crucial factor in our manpower problem—reveals him also as an astute observer of social trends and a thoughtful student of a phenomenon which lesser physiologists are prone to neglect: human nature.

ARLIE V. BOCK, M.D., is professor of hygiene at Harvard University medical school and staff physician at the Massachusetts General Hospital in Boston. A Harvard medical graduate in the class of 1915, Dr. Bock served in France as a member of Base Hospital No. 5 of the United States Army. He held the rank of major in the medical corps. After the war, he studied at Cambridge, England, on a traveling fellowship from Harvard, receiving the Ph.D. in 1922. In 1924, he joined the Harvard faculty as an assistant professor of medicine. He is the author of many papers and articles on medical subjects. "Civilian Fitness," his article on page 344 of this magazine, represents the up to date view of medicine that good mental hygiene must be emphasized in any concept of true fitness. Dr. Bock has a lot to say about the achievement of good mental and emotional adjustments.

Among the other HYGEIA authors this month: CONRAD BERENS, M.D., is an ophthalmic surgeon and director of research at the New York Eye and Ear Infirmary and associate professor of ophthalmology at New York University medical school. AMALIA LAUTZ, Ph.D., is head of the department of home economics at the University of Tampa and a member of the Florida Nutrition Committee. J. ARTHUR MYERS, M.D., is professor of preventive medicine and public health at the University of Minnesota medical school. HERMAN GOODMAN, M.D., is a New York dermatologist. PHOEBE MAYO WALTERS writes now from Corona, Calif., where her husband, surgeon Waltman Walters, is stationed as a captain in the Navy medical corps. VERONICA B. McKINNY is a public school nurse in Garden City, N. Y. JOCELYN TYLER is a Chicago writer who has contributed a number of articles to HYGEIA.

I hate my teacher—

and I hate you, too!

His mother said, "The boy is sensitive. His teacher doesn't understand him."

His father said, "I think that Tommy's getting a temper, and a spanking might help."

His friends said, "Gee, Tommy's a dodo these days."

Certainly, Tommy wasn't the boy he used to be!

But one day Tommy's teacher caught a hint of what the cause might be. She sent a note home to his mother suggesting an eye examination.

That proved the turning point for Tommy—as it has for thousands of other children. He's a new boy now, and he himself says he's glad he has glasses.

Poor eyesight is often difficult to detect in growing children, especially since the children themselves frequently don't know that they can't see as other children do. The safest policy is early and periodic eye examination. It's the one way to be certain that *your* child's vision is — and *will* be — protected. Arrange for an eye examination now.

WHAT ARE SOFT-LITE LENSES?

Soft-Lite Lenses, made by Bausch & Lomb, are scientifically designed to control the amount of light that reaches the eye, without altering color or visual sharpness. They neutralize glare, absorb excess light, protect eyes against eyestrain and fatigue. Soft-Lite Lenses are ground to individual prescriptions. They are prescribed for children as well as adults.

There is only one Soft-Lite— identified by this certificate.

AMERICA NEEDS YOUR EYES

Soft-Lite Lenses

SOFT-LITE LENS COMPANY, INC., 745 FIFTH AVENUE, NEW YORK

Is Your Skin Sensitive?

Then use Marcelle Cosmetics, prescribed by doctors for sensitive skins. No need for you to omit beauty aids, when you can have cosmetics which doctors have prescribed for 11 years.

Guard against skin irritation through the use of Marcelle hypo-allergenic Cosmetics, free from known irritants. Give your own sensitive skin a chance to look its loveliest, confident that you are protecting it with safe cosmetics.

INTRODUCTORY KIT

In order that you may become acquainted with these Marcelle beauty aids, send a dime and your name on the coupon below. You will receive five samples: Marcelle Cleansing Cold Cream, Skin Lubricating Cream, Face Powder, Rouge and Lipstick.

Marcelle hypo-allergenic COSMETICS

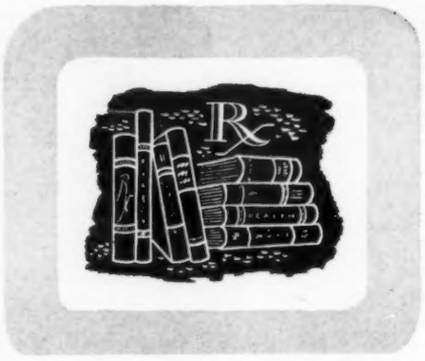
1741 N. Western Ave., Chicago, Ill.

Please send me the five sample beauty aids. I enclose 10c.

Blonde..... Brunette..... Auburn.....

NAME.....H-5-43

ADDRESS.....



Books ON HEALTH

Eat What You Want

By W. W. Bauer, M.D., and Florence Marvyne Bauer. Price, $2.00. Pp. 263. New York: Greenberg Publisher, 1942.

Dr. and Mrs. Bauer, to use a breezy expression such as characterizes many of their writings, have "gone to town" with this timely book on foods and nutrition intended for the general reader. The material is presented essentially as it would be learned by intelligent persons seeking information about what is important in the literature on foods and nutrition. They have done an excellent job of sifting the true from the false and have presented the factual residue in an interesting fashion. Especially noteworthy features are the discussion of the purchasing of foods in the market, the selection of foods in restaurants and cafeterias, and the characteristics of a satisfactory lunch. Each chapter is headed by a few lines of original verse, many of which are quotable and should be of value to teachers who are interested in novel methods of presenting the facts about foods. If there is any criticism it would be in connection with the title. As the authors themselves make clear, it is satisfactory to eat what you want, but you have to know what you ought to eat first.

F. C. Bing, Ph.D.

Now that We Have to Walk

By Raymond Tifft Fuller. Cloth. Price, $2.50. Pp. 256. New York: E. P. Dutton & Company, Inc., 1943.

In these days of rationed rubber and gasoline, a book on walking is welcome. There are chapters on the fields and woods during the different seasons of the year, replete with colorful and vivid descriptions of life within the walker's sight and hearing. Descriptions of bird and animal wild life are especially well written and portray a first hand acquaintance with their activities and habitat. Other parts of the book are concerned with trees, flowers and bees and furnish the novice with an excellent guide to their identification and their life histories. A novel glimpse is the chapter on walking at night, which will evoke some mixed reactions from the tenderfoot who is introduced to a different kind of night life.

Some of the author's philosophies of life and men are interspersed throughout the book and may be seriously questioned. For example, he describes an April excursion into the woods and remarks about "four sets of thoroughly soaked feet and legs, which wetness will never do us any harm." There is real doubt as to the validity of such a remark. In another chapter he says that skiing and bicycling are walking. The remarks about the unsightliness and ugliness of telephone, telegraph and power lines are warranted, but the author is wrong when he says that no one has pulled down a single wire in fifty years to change it. Certain cities—Washington, D. C., for example—have wires concealed underground, and some of the largest transcontinental telephone nets are safely housed in subterranean tubes.

Some disappointment was experienced in the lack of any suggestions for the city dweller, who, through longer working hours and propinquity to his work, finds himself in the heart of a metropolitan center but still enjoys walking. Many suburban residents find it a long way to the "wilderness," and there were no hints about walks in the intervening regions.

Scarcely any mention was made of the equipment needed for walking and, particularly, suggestions

(Continued on page 332)

You can make this day come quicker

SOME DAY, in your town, a whistle will start to blow.

Then another. And another.

Bells will start ringing.

People will rush into the streets. Schools will let out. Flags will appear from nowhere, and banners, and bugles, and drums.

Men and women will march through the streets, shouting, cheering, weeping, yelling.

It's over!

The war is over! *Over*! OVER!

And we've won!

Every American knows that some day *this day* will come. But every American can make it come quicker by putting more of himself into the war.

One way to do this is to buy War Bonds. For every dime and dollar you put into Bonds is working to win the war. It's giving our soldiers the guns and tanks and planes they need to fight with. It's giving our Navy the ships they need to shoot from. It's bringing victory nearer.

Think it over!

Even if you're already buying Bonds (and who isn't?) can't you put *more* money into Bonds *today*? Can't you spend more on Bonds this month, and next month, and the month after that —*every* month until the war is over?

Can't you do just a little bit more to bring victory closer?

This advertisement in behalf of the Treasury's War Bond Campaign is contributed by

PARKE, DAVIS & COMPANY
DETROIT, MICHIGAN

MAKERS OF
PHARMACEUTICALS, BIOLOGICALS AND
SURGICAL DRESSINGS

Put at least 10% of your Earnings in War Bonds

—he has most to offer in SELECTION, COMFORT and VALUE!

It pays to see your authorized Kroll Dealer —he can give you intelligent service in selecting the proper crib, chifforobe or carriage for your baby.

KROLL
Combination KRIB and JR. YOUTH'S BED

KROLL KRIB

Grows with the child!

1 Raise spring and use the crib as a BASSINETTE!

2 Lower the spring and use it as a FULL SIZE CRIB!

3 Substitute half side and use as JR. YOUTH BED!

An exclusive Kroll feature — lengthens useful life of crib. Spring also has TILTING feature—brings comfort to a sick baby by raising head slightly.

STUDIED AND COMMENDED PARENTS' MAGAZINE CONSUMER SERVICE BUREAU

☆ *Sold at leading department, specialty and furniture stores or write Kroll Bros. Co., Chicago, for authorized dealer's name.*

Kroll ★
THE NAME TO LOOK FOR IN JUVENILE FURNITURE & BABY CARRIAGES

Oliver Wendell Holmes, M.D.

A MAN who combined in himself the scientific stature of Compton, the academic renown of Conant, the literary reputation of Woollcott and the social standing of the Cabots would be simply a latter day prototype of Oliver Wendell Holmes, whose biographers for the past fifty years have subtitled their commemorative essays with the label: "Physician, Poet, Philosopher." (Oliver Wendell Holmes, the eminent lawyer and professor of law who became a Justice of the Supreme Court, was the son of Holmes, the physician.)

Best known to the public of his own and succeeding generations as poet and essayist, the elder Holmes has always been honored among physicians on the basis of a solid, if single, contribution to the medical literature of the 1840's—a study which recognized the contagious nature of childbed fever, from which thousands of young mothers died annually. Holmes' lecture, entitled "The Contagiousness of Puerperal Fever," was recently celebrated, on the one hundredth anniversary of its presentation before the Boston Society for Medical Improvement, by an all day conference on maternal health and child welfare sponsored by the Maternity Center Association in New York.

At the time of its presentation and for a good twenty years thereafter, though, Holmes' paper on childbed fever was the center of a storm of controversy among physicians, whom it accused, in substance, of being the principal agency of transmission of a fatal disease. His opponents stood more on prejudice than on fact. One obstetrician declared: "I prefer to attribute [these deaths] to accident and the Providence of which I can form a clear perception, rather than to a contagion of which I cannot form any clear idea." Another, perhaps expressing the same prejudice in simpler language, said briefly: "A gentleman's hands are always clean." Toward these and other belittlers Holmes maintained an attitude of sweet reasonableness. He was sure of his facts, and he refused to be drawn into the controversy, which petered out in time when the work of Semmelweiss of Hungary, more complete and damning in its statistical conclusions than that of Holmes, became known here.

Holmes' reputation as a teacher was built on a much broader foundation: For thirty-five years, he was Parkman professor of anatomy at Harvard University Medical School, where without question his wit and wisdom entertained all his students and inspired many of them. His lectures at Harvard were described at some length by one of his students, Dr. Thomas Dwight, in language which has been borrowed freely, with and without credit, by later biographers. "A charming hour," Dr. Dwight characterized a class with Holmes, "of description, analysis, simile, anecdote and harmless pun, which clothes the dry bones with poetic imagery, enlivens a hard and fatiguing day with humor, and brightens to the tired listener the details of a difficult though interesting study."

Holmes' epigrams have earned an honored place at the banquet table of medical school reunions. Among those which pop up most frequently on such occasions are his descriptions of the female pelvis as "that triumphal arch under which every candidate for immortality must pass," and of the ischia, or bones of the fundament, as "those interesting prominences whereon man sits to survey the works of creation";

(Continued on page 332)

LETTERS FROM *Readers*

Home Nursing

To the Editor:

I am taking the Home Nursing course (Red Cross) and when I noticed that HYGEIA was recommended reading I took down the last three issues which the instructor was glad to have passed around after reading. I noticed the women really seemed interested, and I shouldn't be surprised if you receive some subscriptions. The nurse in charge is going to subscribe. Those three copies contained articles on chapters in our book.

ALBERTA M. PARIS
Milford, Conn.

Must Read

To the Editor:

I am a constant reader of HYGEIA. The articles printed therein are so full of information that in my opinion it should be put on a "Must Read" list of books for every American family.

BERNICE VITAL
Fessenden Academy
Martin, Fla.

Better Covers

To the Editor:

Hurrah for the grandmother and daughter on the March HYGEIA! Because I commented on the "almost too realistic clinical pictures" on the covers I did not receive my Christmas gift of HYGEIA for several years. Now I am again receiving the magazine and am pleasantly surprised at the covers.

Just one person's opinion, and that unasked for!

GERTRUDE E. GRUTZNER
Beloit, Wis.

On Sedatives

To the Editor:

In the September issue of HYGEIA there was an article on sedatives which was exceptionally good, and one which I wish every one could read. That one article was worth the cost of the subscription to HYGEIA.

MRS. A. J. LA TOURETTE
Muscatine, Ia.

How the "Glamour Girl" became a war worker

Always the life of the party, Ice Cream, the "Glamour Girl" of food, now shows her substantial character!

A popular food . . . A nutritious food

As a War Worker extraordinary—in war production, in the armed services, in civilian life—Ice Cream is today an important part of the nutrition program.

ICE CREAM

contributes bone-building, tooth-protecting calcium, as well as strength-building proteins and essential vitamins. Ice Cream provides the same essential nutrients as milk, our No. 1 protective food, although in different proportions, and makes better-balanced meals pleasant and practical. War is bringing widespread recognition of the real food value of Ice Cream.

NATIONAL DAIRY COUNCIL
111 N. Canal St., Chicago, Dept. O
Please send me attractive free booklet "Ice Cream for Everyday Use," which gives suggestions on meal planning, food values, and recipes.

Name_____
Address_____
City_____ State_____

ICE CREAM
. . . CONTRIBUTES TO GOOD NUTRITION

• During this war you may get "only a taste" now and then of Dole Pineapple. The reason is good—¾ of the fruit and ⅓ of the juice we pack are going to the Armed Forces.

• Future crops of Dole Pineapple are being prepared for you. The fields we are putting in now, for example, will bear fruit in 1945.

HAWAIIAN PINEAPPLE PRODUCTS

DOLE

COMING IN HYGEIA

America will emerge from this war making glass that won't break, wood that won't burn, shoes without leather and automobiles that will make 1942 models look like the old horseless carriage. Still more important will be industry's concern for the welfare of the worker. For industry is finding out that the best way to speed production is to keep its workers at work, and that means maintaining health—by safety programs and physical examinations and by attention to the worker's diet, housing and transportation problems. Walter F. Perkins is one industrialist who is convinced that we will come out of the war into a better world. His highly practical reasons are worth reading about in "Management and Industrial Health," his article in next month's HYGEIA.

—◈—

If you are one of the 18,000,000 victory gardeners who are taking up the spade and hoe this year in defense of the family board, you'll wish to make certain that your backaches, mosquito bites and bruised knuckles bring the greatest possible return in better nutrition for your family. That's another way of saying that you don't want to miss "Your Vitamin Victory Garden," by J. G. Alexander, in HYGEIA for June. It tells you how to follow through on your victory garden plan with best results in terms of vitamins and minerals where they count—on the family dinner table at the end of the season.

—◈—

Did you ever—be honest, now!—take some medicine for a sore throat or an upset stomach, only because that medicine was prescribed for some friend who had an apparently similar ailment? You took a long chance when you did it, because a prescription is always an order for the preparation of a medication to treat a specific disease or relieve a specific symptom in one person. What chance you took—and what might have happened—are explained in Dr. Austin E. Smith's article in HYGEIA, *"The Use and Misuse of Prescriptions." His advice may save your family some money and some pains, and possibly prevent a tragedy.*

—◈—

ALSO COMING: Articles on nutrition in pregnancy, anemia, contagion, urology, posture, poison ivy, Army health, child care, industrial health, nursing and other subjects of interest to all who like to keep abreast of the times in medicine and health.

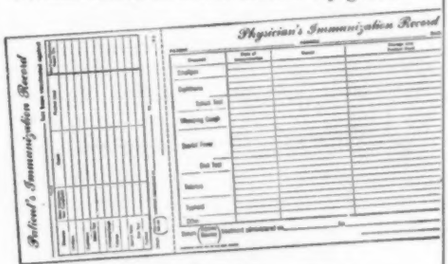
It is YOUR duty now . . . to protect them against Contagious Disease

Don't risk your children's safety a day longer—make SURE their immunization is UP-TO-DATE

When your husband's away at war . . . and doctors are busy and hard to reach . . . could *you* face what might happen if your child got Diphtheria or Smallpox? Dare you risk *Whooping Cough* when you realize that under 5, Whooping Cough causes more *deaths* than measles and scarlet fever combined?

Immunization is the great modern blessing which *prevents* many contagious diseases. But if you're like most mothers interviewed in a recent nation-wide Roper Survey, you're probably failing to keep your child's immunization *up-to-date* . . . for his age!

See your physician immediately. He can quickly tell you just what protection your child needs *now.* Ask him, too, for the Immunization Record Card which Sharp & Dohme have made available to doctors. This vital record-and-reminder card tells you for *what* diseases your child has been immunized—and *when*—and serves as an automatic reminder to re-check with your physician at the proper time. This *accurate* written record is a *real Health Safeguard.*



This Immunization Record Card will help you safeguard your children's health

Sharp & Dohme
PHILADELPHIA

IF YOUR CHILD IS—

A baby—his first vaccination for Smallpox should be given when he's 3 months to a year old . . . his first immunization against Diphtheria before the end of the first year. Your physician may also recommend immunization against Whooping Cough—which causes many *deaths* among children under 5 years old!

At 18 months to 2 years—many physicians advise immunization against Scarlet Fever, Typhoid and Tetanus. Ask your own doctor.

At 6—*re-vaccination* against Smallpox is advised . . . and your child should be Schick-tested for Diphtheria.

Around 12—children should again be re-vaccinated and Schick-tested.

IMPORTANT NOTE FOR ALL AGES! If your child did not receive the protection he should have had at an *earlier* age, see your physician immediately and have him immunized *now.*

Books ON HEALTH

(Continued from page 326)

are lacking on how to hike during shoe rationing. The book provides an entertaining, factual account of happenings in the woods.

HAROLD C. LUETH, M.D.

The Family in a World at War

By Sidonie Matsner Gruenberg. Cloth. Price, $2.50. Pp. 298. New York: Harper & Brothers, 1942.

These articles were each written by a well known authority. Paul V. McNutt on "The Home Front and the National Defense," Louis B. Hershey on "The Impact of the Draft on the American Family," Pearl S. Buck on "At Home in the World," Susan Isaacs on "Children of Great Britain in Wartime," Anna W. M. Wolf on "Women and War Jobs" are just a few of the selections.

The book was planned by the board and the staff of the Child Study Association of America. Its purpose is to help families adjust to the present crisis, in this way helping to win the war and assuring the goals for which we are fighting. The factual knowledge here is interesting to both men and women. However, this is primarily a woman's book and should be read subjectively. Here the perplexed mother may find insight and guidance in solving her problems.

Anna W. M. Wolf's article on "Women and War Jobs" is more poignant as the demand for women workers becomes more pressing. She stresses home as democracy's first line of defense, and the homemaker's chief contribution to total war is keeping the home fires burning. Most women can do something besides this toward the war effort. Mrs. Wolf suggests some guideposts for deciding how much time one can afford to give and lists many ways one can manage more easily at home while carrying on work outside.

BARBARA FISHBEIN FRIEDELL.

NOTICE

Books reviewed in this section should be ordered from booksellers or direct from the publishers. They may not be secured through HYGEIA or the American Medical Association, unless published by this organization. The following list contains the complete addresses where the publishers mentioned in these reviews may be reached:

E. P. Dutton & Company, Inc., 300 Fourth Avenue, New York City.

Greenberg Publisher, 400 Madison Avenue, New York City.

Harper and Brothers, 49 E. 33rd St., New York City.

OLIVER WENDELL HOLMES, M.D.

(Continued from page 328)

and his interpretation of Ricord, the venereal disease investigator under whom he studied in Paris, as "the Voltaire of pelvic literature, who would have submitted Diana to treatment with his mineral specifics and ordered a course of blue pills for the vestal virgins." This is the stuff, as many a resourceful professor struggling against the twin impedimenta of a dry subject and a sleepy class has discovered, of which pedagogic fame is manufactured.

Dr. Holmes' literary accomplishments are well known to all who have survived the educational process through the sophomore year in high school, by which time "The Autocrat of the Breakfast Table," "The Chambered Nautilus," "The Deacon's Masterpiece" and "Old Ironsides" are firmly embedded in the awakening cultural consciousness. The fact that a substantial number of adult Americans, long after they have forgotten all the Shakespeare, Milton, Tennyson and Longfellow they ever knew, can come to scratch with at least one stanza of "The Chambered Nautilus" ("Build thee more stately mansions, O my soul, As the swift seasons roll; etc.") is probably a greater tribute to the quality of Holmes' poetry than all the prizes he won in his lifetime or all the honors accorded him by those who make a livelihood of literary evaluation.

Holmes' social position was indigenous to the Back Bay area of Boston, where his family for three generations before him had lived comfortably among an aristocracy which had not yet admitted to membership the group later described as "that untitled nobility which has the dollar sign for its armorial bearings." As a matter of fact, Holmes' father, a clergyman, was hard pressed for the means to finance his medical education, which in those days required a year or two of study abroad. With this background, it was inevitable that Holmes should occasionally reveal traces of snobbishness, which he did, perhaps, when he expressed a preference for "the man of family." Yet on the whole he remained remarkably human, preserving the common touch throughout years when he was idolized to a point which might have turned the head of St. Francis of Assisi.

The most illuminating incident to show that Holmes did not invariably stand on his dignity is also one which speaks eloquently of his genius as a teacher—if it can be assumed that teaching at its best demands a flair for showmanship. Lecturing to his class in anatomy one spring afternoon when the sun was streaming through the open window beside the rostrum and the students were exhibiting signs of inattention appropriate to the season, Holmes was discussing the bones of the skull. At one point, he walked over to the table and picked up a specimen. Holding it up for all to see, he said gravely: "Gentlemen, this is the sphenoid bone." Then he threw it out the window.

R. M. CUNNINGHAM JR.

It's a gift, Mommy!

FREE! New illustrated booklet makes bathing baby easier, safer!

THE FAMOUS MATERNITY CENTER ASSOCIATION in New York City uses the bathing technique described in this brand-new booklet! Not only the bathing technique, (completely illustrated) but the entire contents of this helpful booklet have been approved by this nationally famous organization. Your doctor will tell you that you can use it with complete confidence—ask him!

LOTS OF "EXTRAS" BESIDES! . . . Besides correct bathing technique, the proper way of lifting and carrying the baby is illustrated. The easy, safe "Football" hold that nurses use, which leaves one hand free. You'll also like the washing hints for baby's laundry—the wise advice it gives on care of precious rubber nipples. With the weight chart, birth record, and other extras—you'll want to keep this booklet always. "Bathing Your Baby—the *right* way!" has been prepared by the makers of pure, gentle Ivory Soap. . . . 99 44/100 % pure . . . It floats!

PARTIAL CONTENTS:

THE 4 TYPES OF BATHS
THE SAFE "FOOTBALL" HOLD
NIPPLE CARE
DIAPER CARE

SEND COUPON FOR FREE COPY!

PROCTER & GAMBLE,
Dept. H, Box 837, Cincinnati, Ohio

Gentlemen: Yes—I'd like a copy of your free booklet "Bathing Your Baby—the *right* way!"

NAME_____

STREET_____

CITY_____

STATE_____

More Doctors advise

IVORY SOAP

than all other brands together

THE HEALTH PROBLEMS OF INDUSTRY

- - An Editorial by MORRIS FISHBEIN

THE SPEED of the processes of modern industry, particularly associated with the war effort, has given increasing concern to all the many agencies which are charged with the health of the worker and his efficiency. The past few months have been marked by several conferences devoted particularly to these subjects, including among others the Annual Conference of the Council on Industrial Health of the American Medical Association. The reports of that conference have already been reflected in various publications. One of special interest published in HYGEIA for April dealt with the special problems of women in industry. In this issue of HYGEIA appears a report by Dr. A. J. Carlson on the employee of advanced age. These two problems may well be considered among the most important of those that challenge the personnel departments, management and the medical staffs of industrial concerns. However, there are many other problems which are also primarily the concern of the physician.

A four-day war conference has been called to meet in Rochester, New York, in the period from May 24 to May 27 under the auspices of the American Association of Industrial Physicians and Surgeons, the American Industrial Hygiene Association and the National Conference of Government Industrial Hygienists. The problems that are to be discussed are indicative of the many fields into which modern industrial medical science and public health may reach:

First, as has already been mentioned, is the mass entry of women into industry; second, the problems of employees of older age, including particularly the problem of placement; third, the rehabilitation and proper employment of men and of men already discharged from the military services because of disabling conditions; fourth, toxic and other hazards from new drugs, new chemicals, new processes and new substitutes used in industry; fifth, absenteeism; sixth, fatigue; and seventh, nutrition.

Associated with these problems are other changes in industry brought about by the war, including long hours, double shifts, two-job workers, overtime and the increased industrial accident rate. Fortunately for the worker, the advance of medical science, stimulated perhaps to some extent by the war, has brought new methods of treatment both in medicine and in surgery which go a long way toward the prevention and treatment of industrial injuries and diseases.

Industrial health is now recognized as a distinct specialty in the field of medicine. Official, semi-official and private agencies have been developed for analyzing the problems and planning for their control. Stimulated largely by the Council on Industrial Health of the American Medical Association, several state medical societies have developed clinics, demonstrations and courses in graduate education designed to bring general practitioners of medicine up to date in the problems of industrial health. The machine age has not been one of unadulterated benefit to mankind. Probably one of the greatest problems for the future is going to be the attempt to find the answer to a significant question. That question is not "Is man a machine?" but "Can man live with the machines?"

Nurses

AND THOSE THEY SERVE

By ALINE TRIMBLE

There's a war job to be done by the nursing profession that will extend into peacetime

ONE acute war shortage may affect you and your family vitally. It's in nurses. If you haven't felt it personally yet, you've simply been fortunate enough to keep well—and with you your sisters and your cousins and your aunts, and all the male relatives also!

An unprecedented boom in babies is swamping our hospitals on the one hand. On the other, graduate nurses are being called from civilian to military service at the rate of 3,000 a month. Those who remain on the home front are doing a magnificent job. By dint of each nurse's shouldering more responsibility, systematizing procedures more, eliminating nonessentials in training and using more aides, the hospital situation is being met for the moment.

Yet we must look ahead. From only 1,600 in 1940, the Army and Navy Nurse Corps must be built up to 61,000 nurses by the end of 1943. Only about half that number are now in service. Taking so many out of a profession that had, according to a national inventory, only 173,000 active members in 1941, will inevitably make it more difficult for you to get the nursing care you'd like to have, in case you're having a baby, or if accident or illness befalls one of your loved ones. If we add uncounted nurses and new graduates to the total nursing supply and figure it at 262,000 by next October, as official estimators are doing, the military is still asking for almost one nurse in four.

Does that mean we'll grudge our fighting men one iota of the nursing care that is being given them? Far from it. Knowing that doctors and nurses are at hand is one of the greatest comforts to relatives of those in the danger spots. That fact was made clear by the relatives of the men lost on Bataan and Corregidor when they besieged the handful of evacuated nurses at Letterman General Hospital in Presidio, Calif., last summer. The nurses—themselves worn and ill from their experiences—found it harder to talk with the families of the "expendable" men than they had found it to improvise hospitals out of carabao sheds on Bataan, or to gather up their twice-wounded patients after plainly marked hospitals had been shattered by Japanese bombs.

"Many brought us photographs and showed them to us mutely, unable to speak. There was weeping and hysteria and women who fainted, and there was Spartan courage that was almost harder to bear," writes Juanita Redmond, one of the nurses, in her book, "I Served on Bataan," which has just come from the press. Every American should read this simply told tale, not merely to know the terror, heroism and hunger that paid for our national shortsightedness but also to appreciate the vital role played in war by Army and Navy nurses.

Even now that we are winning, the presence of an American woman skilled in giving comfort to the sick brings a sense of normalcy and hope to the battle wounded. Many a mother whose son has been fighting the grueling battle of Guadalcanal must have wept over a recent pert little news story about the arrival of the first Army nurse on that hard-pressed island.

Nurses check a blood count at an Army hospital. The Army wants 61,000 nurses by the end of 1943

The bearded, haggard boys stared as at an apparition when pretty, 26 year old Lieutenant Mae Olson of Little Falls, Minn., stepped off a hospital plane that had come to evacuate wounded. Looking at the first American girl to appear on Guadalcanal since the war began, they were unable to answer what she said to them as she helped patients into the plane.

Indubitably, our fighting forces must be given all the nursing care they need. But how shall we, at the same time, maintain the nursing end of health services on the home front? I say how shall we, because we must maintain the most essential services. Total war underscores the truth in the words of Surgeon General Thomas L. Parran of the United States Public Health Service: "The strength of any nation does not exceed the strength and health of its people." An unchecked epidemic would be the ablest ally of the enemy. When, for example, we cannot send armies to the fighting fronts any faster than we can build ships to transport them, the health of shipbuilders is as important as the health of the Army and Navy.

The most obvious answer to that "How shall we?" is: "Educate more nurses."

Efforts in that direction antedate Pearl Harbor, for a definite nurse shortage had become evident before the war began. More and more people have been going to hospitals in recent years, due to a variety of changes in the American scene. More mothers, for example, are working outside the home. More families are living in crowded apartments, rather than in detached houses. Incomes have been rising. Group hospitalization plans, which had 11,070,000 subscribers last year, have made hospital care possible for many who could not afford it before. Whatever the causes, it is estimated that average daily bed occupancy in hospitals (exclusive of those for care of mental diseases and convalescent homes) increased 10 per cent in 1942 over 1941, and that 1943 will in turn show a 10 per cent increase over 1942.

The need for nurses in civilian hospitals has grown accordingly. To meet it, the number of new students entering schools of nursing in 1941-42 was stepped up to 44,000 from the 34,000 average that had prevailed for several years before. When war came, a quota of 55,000 was set for the school year 1942-43. Five thousand more young women have entered the

OEM Photo by Palmer

Public health nurses are needed increasingly as civilian populations grow in war industry centers, with danger of overtaxing present health agencies

OWI Photo by Henle

Hospital occupancy increased 10 per cent during 1942, creating a need for more hospital nurses

nursing profession this year than last. Yet the goal has not been reached, and next year an even larger quota, 65,000, will be sought. Nursing, probably the most vital war work women can do today, at the same time offers a fine professional future. More about that later, and about how you can encourage that daughter, niece or friend to enter it.

Meantime, the National Nursing Council for War Service and its cooperating organizations are urging every community to use available nurses in the wisest possible manner. While to some extent wartime America must get along with "less and less of more and more" health services, just as it must change its diet and motoring habits, reductions cannot go beyond certain minimums without devastating effects. Nursing skills must be rationed in such a way as to maintain essential activities.

Some of the most important ways in which the public can help stretch nursing services are these:

1. Women with free time should train and serve in hospitals as Red Cross Nurse's Aides, until the goal of 100,000 for the nation is reached.

2. More women should take the Red Cross Home Nursing course, thus preparing themselves to care for minor ailments at home.

3. Retired nurses should be encouraged to return to their profession for the duration of the war. There are in the United States over 100,000 graduates of schools of nursing who are no longer active in their profession. Just how many of these are physically able to return to work, and do not have small children to keep them at home, no one knows, but certainly enough to give an appreciable service.

4. Community leaders, whether men or women, can cooperate in the establishment of hourly nursing services by health agencies, whereby a number of patients may be cared for in their own homes by one nurse.

5. The public can cooperate in wiser distribution of available professional skills by better understanding of the different needs for nurses and their relationships to the general good.

Do you, for example, know an able young instructor in a school of nursing? And are you forever asking her why she doesn't join the Army or Navy? If so, you may be making life miserable for a young *(Continued on page 378)*

OWI Photo by Henle

Through first aid training, nurse's aide and home nursing courses, volunteers are learning nursing skills and helping to stretch available services

THE OLDER WORKER

WHILE it is true that modern war can be waged most efficiently by men between the ages of 18 and 35, the industrial needs of this war have already demonstrated anew several important facts about the older industrial worker, facts well known but forgotten or ignored in the plethora of peacetime manpower and under a social philosophy according to which society must feed, clothe and house idle chicks whether or not these chicks can scratch. These facts are:

(1) The physiologic age of the worker is not synonymous with his chronologic age, owing to the individual variables in heredity, mode of living, accidents and results of disease.

(2) While most workers past 50 or 60 years of age have somewhat less physical strength and physical endurance as well as some impairment of hearing and vision, this may be compensated in many forms of labor by greater skill and experience and the decrease in youthful dissipation.

(3) By keeping in idleness older workers who can still perform useful labor we are not only wasting valuable human resources, but we are contributing to biologic parasitism and degeneration of human society. For man is no exception to the biologic law that existence without effort, without struggle, impairs the species.

(4) By forced idleness of the increasing army of older workers in our midst we are forging a dangerously weak link in that large fraction of society whose experience, wisdom and relative unselfishness could guide those with less experience and wisdom. For when a person is shunted out of the dynamic current of life, courage and incentive are at low ebb.

(5) The philosophy of an equal hourly wage for all workers in each special trade must share part of the blame for the past practice of discarding the older worker by the management of industry. All workers are not equal in skill and efficiency. The practice which tends to gear the rate of all workers to the slowest in the group nevertheless

By ANTON J. CARLSON

day when the older worker in many given tasks cannot keep pace even with the slowest and least efficient of his younger comrades. Economic management calls for dismissal of the older worker at that point. If wage in proportion to performance was permitted, the older worker could taper off in industry, just as the young apprentice works himself gradually up in skill, performance and remuneration. Another destructive effect on morale, efficiency and joy of living results from the practice of gearing the most efficient to the rate of performance of the least efficient. On that plan, the ablest worker will seldom if ever experience the joy of performance according to his superior ability, nor the growth in skill commensurate with his ability. This is not only a waste of precious human resources but a tendency to make lives humdrum, lives that could be enriched by the daily challenge and joy of more and better performance. For the ablest worker to be geared to mediocrity, to do less than his best, is bad psychology for our ablest people, and is, so far as I can see, of little or no aid to the less able fellow citizen or to society. I speak not without experience. I was a farm hand and a labor union carpenter before I became a college student and an investigator and teacher in the medical sciences.

Under more primitive and biologic conditions of human life, as in life on the farm and in agriculture in general, work and responsibility of children and youth have their normal biologic upward curve, as is the case among all wild animals which have to scratch for their living. Under similar conditions of life, as on the farm, men and women past 50, 60 or 70 years also find their niche of productive work, happy in the knowledge that they still have a part in the stream of life. Biologically, man grows in understanding and physical and mental efficiency from birth up to 25 or 30 years. Then there is a plateau of efficiency for some 20 years, health being present. Then *(Continued on page 375)*

WITH FACTORIES working on twenty-four hour shifts, longer hours for clerical workers, and aviators having to adapt to the effects of high altitude, strong eyes are important to the war effort. Increased physical strain, emotional stress and the more rapid tempo of our daily lives have added to eyestrain. Eyestrain, or ocular fatigue, is synonymous with the term "asthenopia." The definitions of eyestrain are varied, ranging from weakness or speedy tiring of the eyes with pain to weak or impaired vision.

TIRED EYES

By CONRAD BERENS

Symptoms of eye fatigue may include headache, dizziness, general fatigue, confused or even double vision, aching of the eyes, blurring of print, the appearance of tears while reading, a pulling sensation in the eyes, inability to read for any length of time, a desire to close or cover one eye in reading, redness of the border of the eyelids and at times even congestion and inflammation of the membrane lining the eyelids, the conjunctiva.

An instrument called an ophthalmic ergograph has been devised by Howe to test the ability of the muscles of the eyes to withstand fatigue. In testing eyes for fatigue, small print or a line on which the subject focuses his

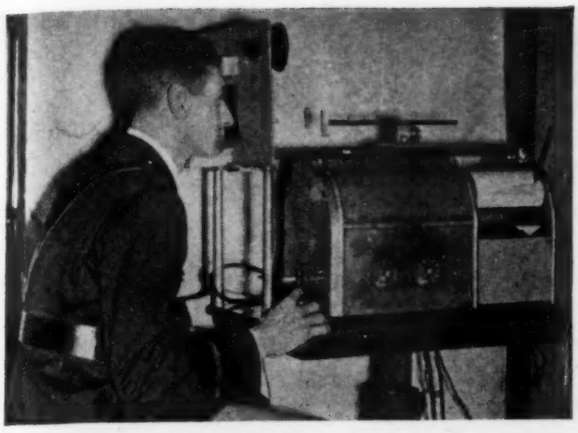
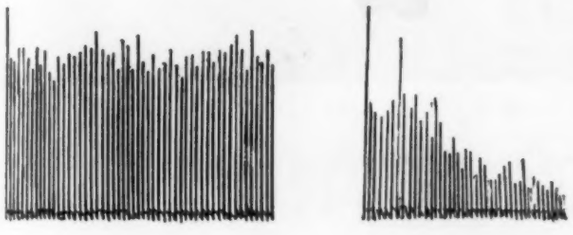


Fig. 1: Testing ocular fatigue with an ophthalmic ergograph.

Fig. 2: Short lines indicate fatigue. One eye (lines at left) fatigued more rapidly than the other.



A B

Fig. 3: Effect of altitude on focusing. At sea level (A), no fatigue occurred, but at 22,000 feet (B) tiring was rapid.

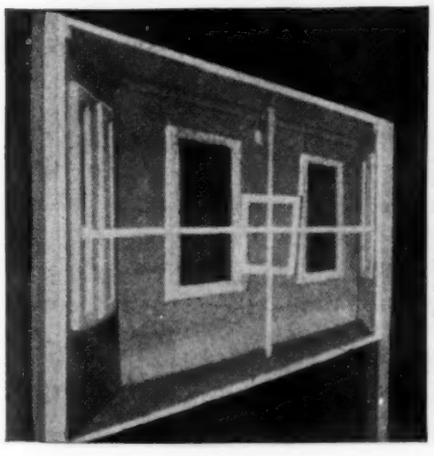


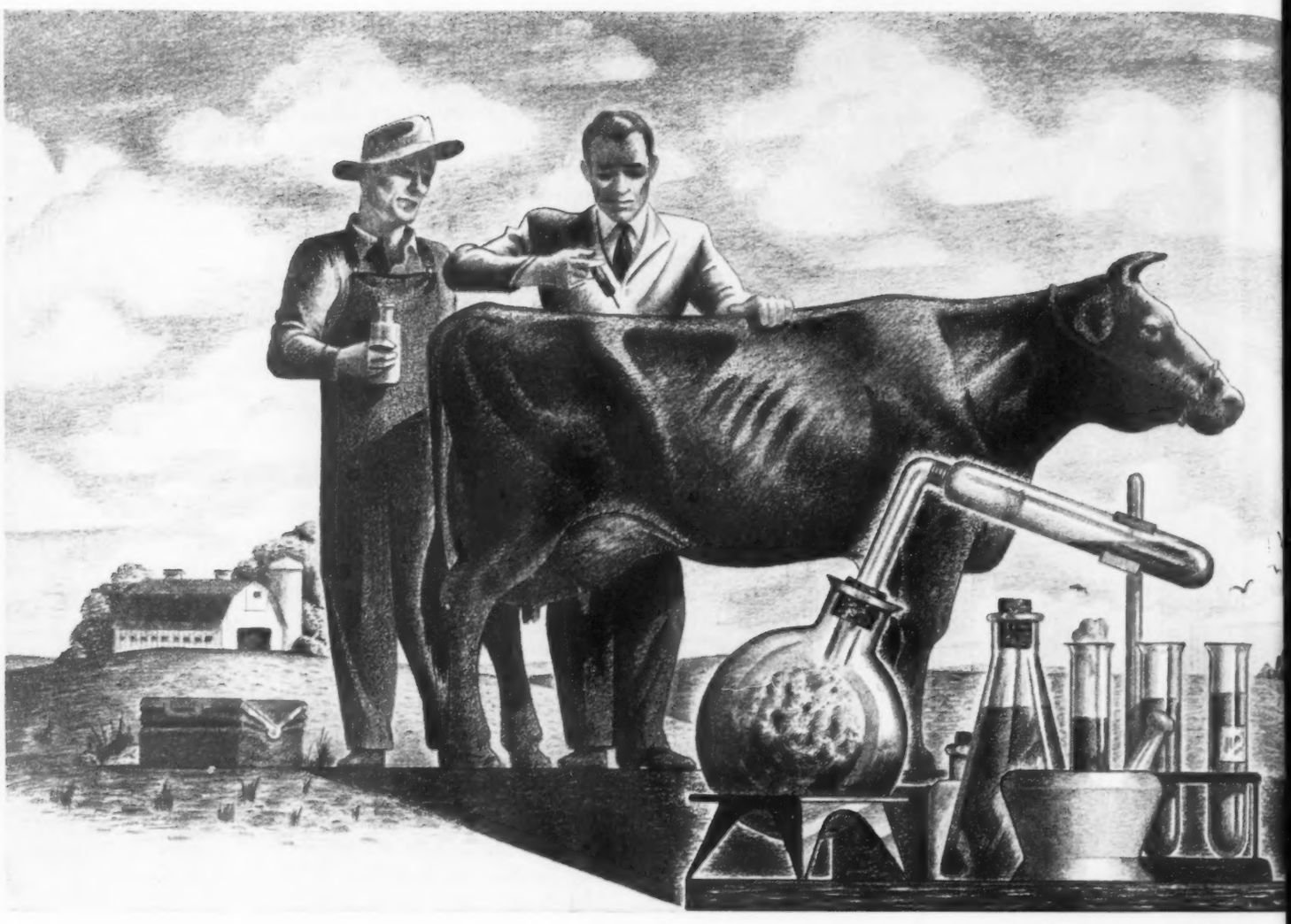
Fig. 4: This distorted room can be made to appear square by special glasses which magnify the image in one eye.

vision is brought up to the eyes and then drawn away. As the object is moved back and forth, a pen records the movements of the test object. The number of approaches of the test object per minute is controlled by a signal bell. When the bell rings, the subject pushes the control lever away from him, watches the test object and as soon as it becomes blurred pulls the lever back and holds it until the next signal bell. This procedure is repeated for fifteen minutes, provided the subject does not fatigue before the end of the test. Since general fatigue becomes a factor after fifteen minutes, it is usually impractical to continue tests of eye fatigue for a longer period. In testing the muscles inside the eyes, which permit focusing on fine print, records are made with the right and left eyes, because marked differences are sometimes found in the records. The length of time it takes to fatigue the outside muscles of the eyes, which prevent the subject from seeing two lines of print while reading, may also be studied.

Eye fatigue is often associated with inability to focus on near objects and to read comfortably. Therefore, there is no doubt that accommodation, the act of focusing on a near object, is an important factor in asthenopia. Adults of 45 years of age, even though their eyes are healthy, usually have difficulty in reading telephone books and have a tendency to hold books and papers as far away from the eyes as their arms will permit. This is the result of an inability to focus on a near object, caused by hardening of the lens. With age the lens becomes less and less elastic, and consequently focusing on near objects becomes more difficult.

Accommodation may be normal, that is, print may be read as close to the eyes as it should be for a particular age, yet tiring of the eyes on reading may occur rapidly because the muscles of the eyes fatigue easily and cause the eyes to strain in seeing. This phenomenon is analogous to the fact that even though one might easily bend his arm to its full extent, the arm could tire rapidly if the movement were repeated several times.

Some subjects experience relief from tests of eye fatigue. Such persons frequently improve with eye muscle exercises, spoken of technically as orthoptic training. Unquestionably, eye exercises have been abused by charlatans, and too much is claimed for them in producing perfect sight without glasses. However, there is no doubt that in *(Continued on page 379)*

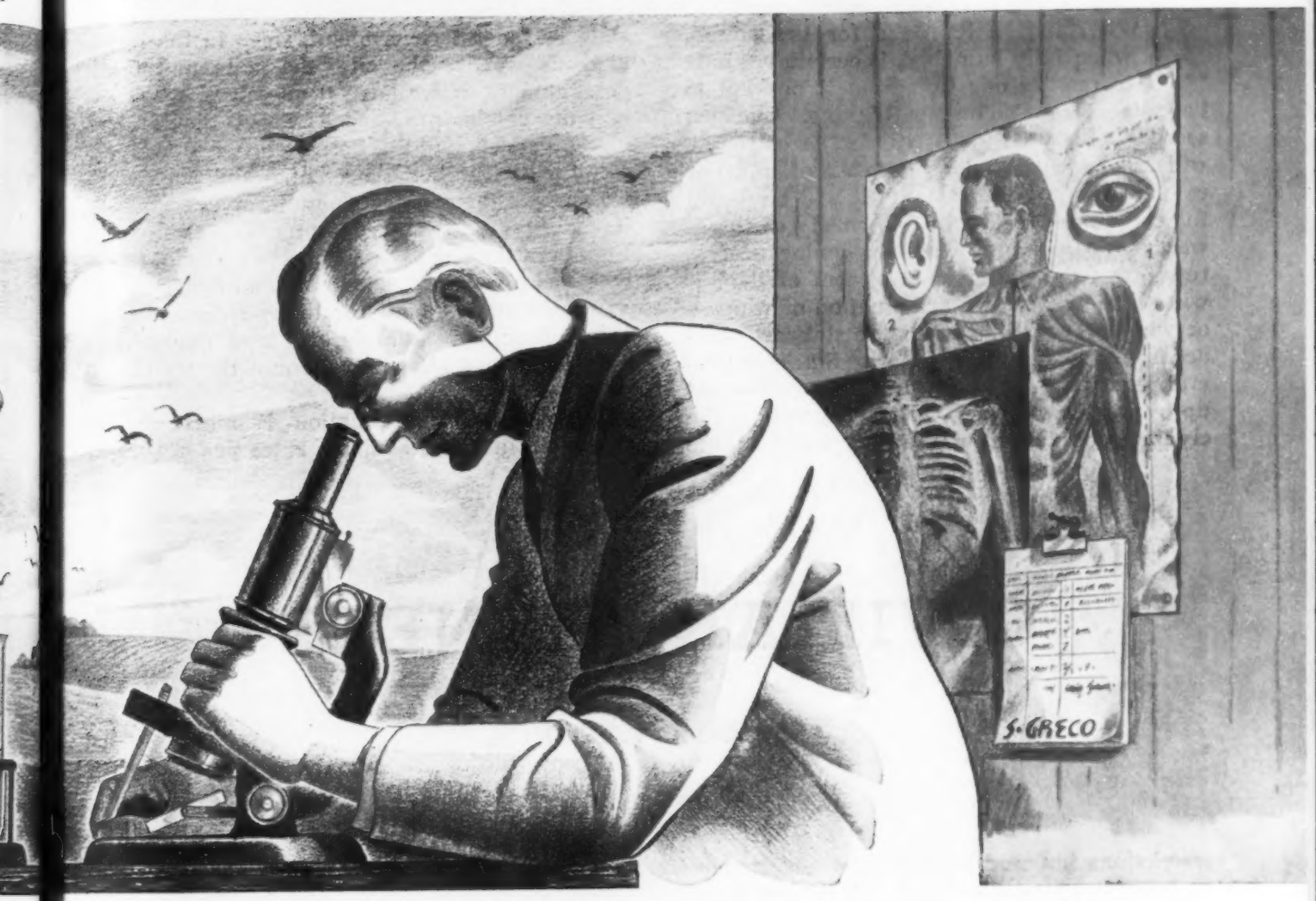


CONTROL OF

ONE DAY more than thirty years ago—in 1907, to be exact—a genial, handsome man, bearing a remarkable resemblance to the late President Taft, sat writing at his desk in the Bureau of Animal Industry in Washington. He wrote, "In my opinion the time is very near at hand when our profession will be face to face with the problem of eradicating this plague from the herds of our country."

Prophetic words these—written by the man who was to play a major part in the campaign he predicted—the eradication of tuberculosis from the cattle and other livestock of the United States. It was a campaign requiring foresight, scientific knowledge, leadership. Alonzo Melvin, recently appointed Chief of the Bureau of Animal Industry, had all of these.

Early in his career as Chief of the Bureau, one problem in particular loomed up and threatened to grow and blot out all the others in importance. It was a disease with which, in man, Melvin was already unhappily familiar—tuberculosis. This time it was the cattle which suffered and dumbly, patiently and sadly wasted away. It wasn't a dramatic ailment, like hoof-and-mouth disease, that made a swift and spectacular advance; rather, it crept quietly into the pastures and barns, like a soft-shod thief. There it worked silently, without alarm, until the entire herd was attacked and relief measures were impossible.



TUBERCULOSIS

By J. ARTHUR MYERS
and VIRGINIA L. DUSTIN

Just as the human variety of tuberculosis is found in all types and races of men, bovine tuberculosis was found in the well kept dairy herd as well as among the half-wild range cattle that never see a barn from one year's end to the next. It affected the beautiful, fawn-colored Jerseys and the neat, sleek, black and white Holsteins more often than the scraggy, hairy range steer. All this, of course, placed a terrific burden on the farmer, who saw valuable animals waste and die and others condemned as milk and meat producers because they had contracted tuberculosis.

More important still was the fact that bovine tuberculosis was transmissible to man and that children were particularly susceptible. Many a case of fatal meningitis, swollen glands, crippled joints and cruel, hunchback deformities could be traced to the simple act of a child drinking a glass of milk—milk contaminated with tubercle bacilli from an infected cow. It was perhaps because he had been a victim of the great white plague himself that the young chief threw himself so whole-heartedly into measures for its control.

At first there was a good deal of opposition to the use of tuberculin on the grounds that it was too costly, too difficult to administer and was not always reliable. As time went on, research workers improved it and made it more potent, until only a small amount was required to give a clear *(Continued on page 389)*

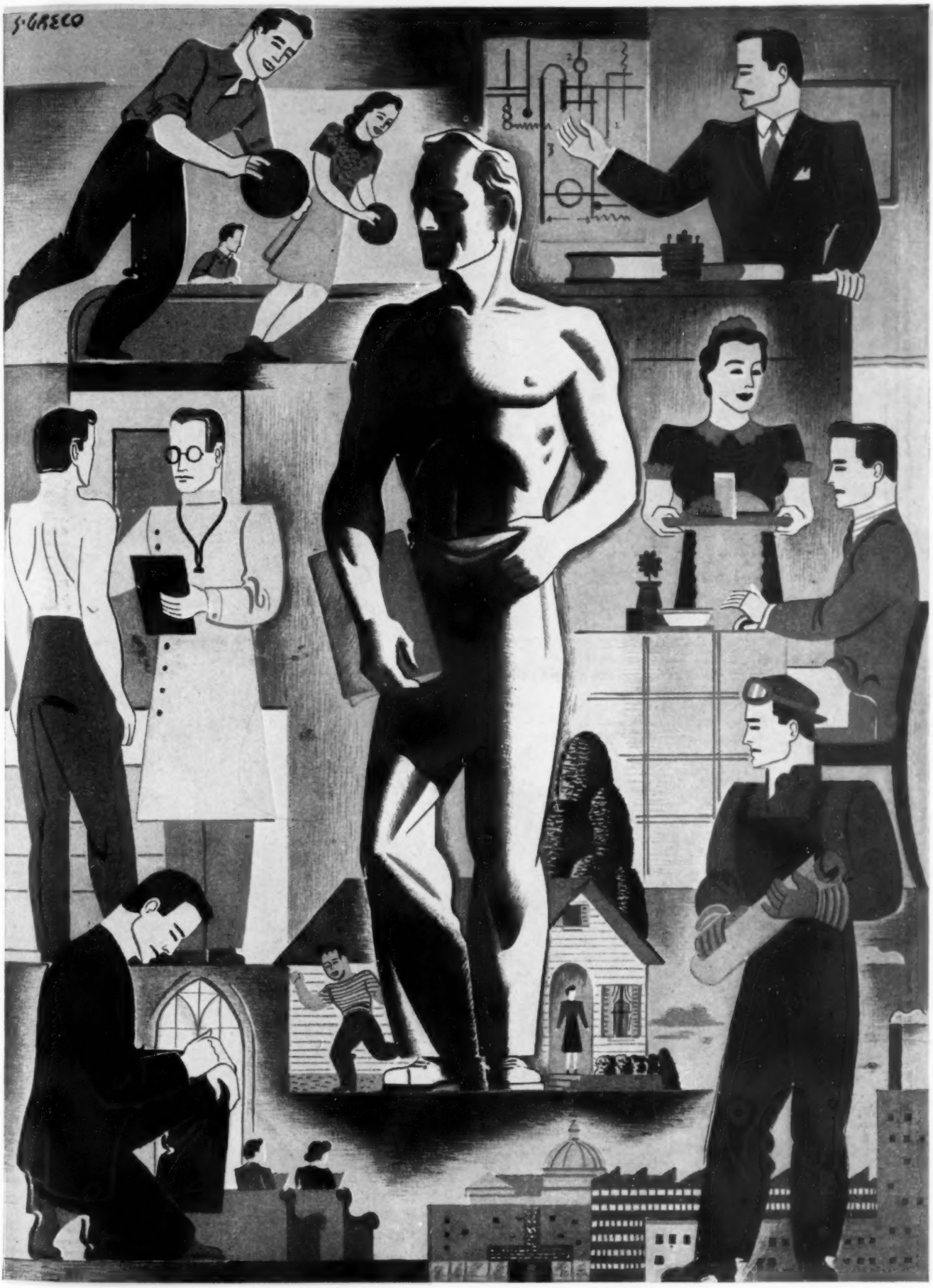
CIVILIAN FITNESS

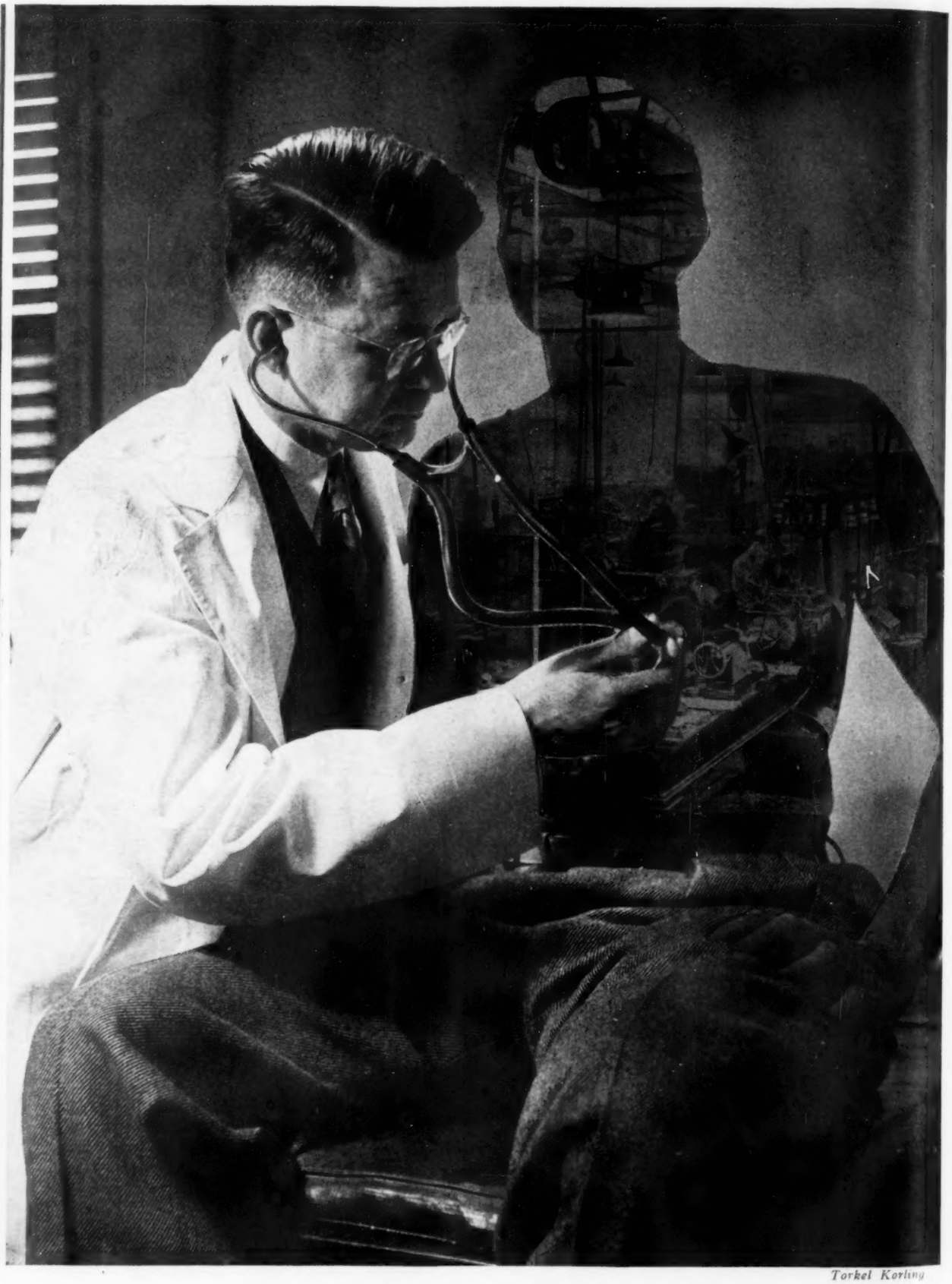
By ARLIE V. BOCK

A WARTIME ECONOMY for the nation, when fully launched, is certain not only to modify our living conditions but to have its effects also on our thinking. Our own sacrifices for war, unless carried to extremes, will not be without benefit to all of us. For example, in a land of plenty it will be useful for us to discover again the variety of things we can do without. The toughening process resulting from a universal system of denials will show whether we are a nation of whiners or whether we still possess the stalwart characteristics of our pioneer days. Since, in general, our warriors thrive under conditions set up by wartime service, we can expect that the civilian population will adjust itself to the restrictions imposed on it by the government and that it will also prosper. There are many differences between the life of the soldier and the civilian, the main difference being that the soldier leads a disciplined life, regulated by his superiors for his safety and effectiveness, while we as civilians must learn to discipline ourselves under restrictions that promise to become increasingly severe.

We are here to consider the question of fitness. By fitness we do not mean that of the nuxated iron man of the advertisements but fitness of all of us who must meet the challenge set up by the demands of daily life. Fitness is a composite made up of the natural constitution of the person, his food, clothing, housing, training and occupation and his mental and spiritual outlook. It is therefore in most respects not a product of chance. It must be worked for, and once secured it must be maintained. It is not for some day in the future but for the present. It is not exclusively for the wealthy but is available even to the poor. Alibis have no place in its scheme of things. No magic pill of medicine or vitamins alone can produce it. Lack of it is not due to city, state or federal government, since in the last analysis we are the city, the state and the government. If we have it ourselves, we can help our neighbor to have it. This is the design of the good home, the school and church, the community fund, the host of social agencies with which the country abounds, and certainly it should be a primary aim of government. Fitness in the last analysis means a way of life designed to produce the maximum of efficiency and contentment both for the individual and the community. We do not lead our lives alone but must take into account the welfare of others.

The health of the nation is most often described in terms of death rates per 100,000, the declining incidence of such scourges as tuberculosis, typhoid fever and diphtheria and the rising figures of deaths due to heart disease and cancer. This method of approach to the problem is an important reflection of the medical, public health, and sociologic status of the nation. It is a reflection also of the great concern of medicine in general with the study, prevention and cure of disease. Great help will be needed in the future from public and private funds to sustain and increase the scope of all of these ventures for the public good. On the other hand, the time has come when the profession of medicine must take a more constructive interest in the great mass of us who do not suffer from specific diseases. Doctors know a lot about our gallstones, pneumonias, and ulcers, but they are taught astonishingly little of the alleged Chinese version of how to keep well people well. Most of us who are doing our daily jobs are, in a sense, taken for granted. It is assumed that we will carry on. We can tell our little tales of woe to our doctor, but if he doesn't find evidence of disease his interest lags. This point of view, like so many others, *(Continued on page 396)*


J·GRECO



Torkel Korling

Industrial physicians today are hard at work seeking the cause and treatment of "absenteeism." Better health for workers is an objective of industrial leaders

FIVE BILLION, 000,000 5,000,000 DAYS OFF

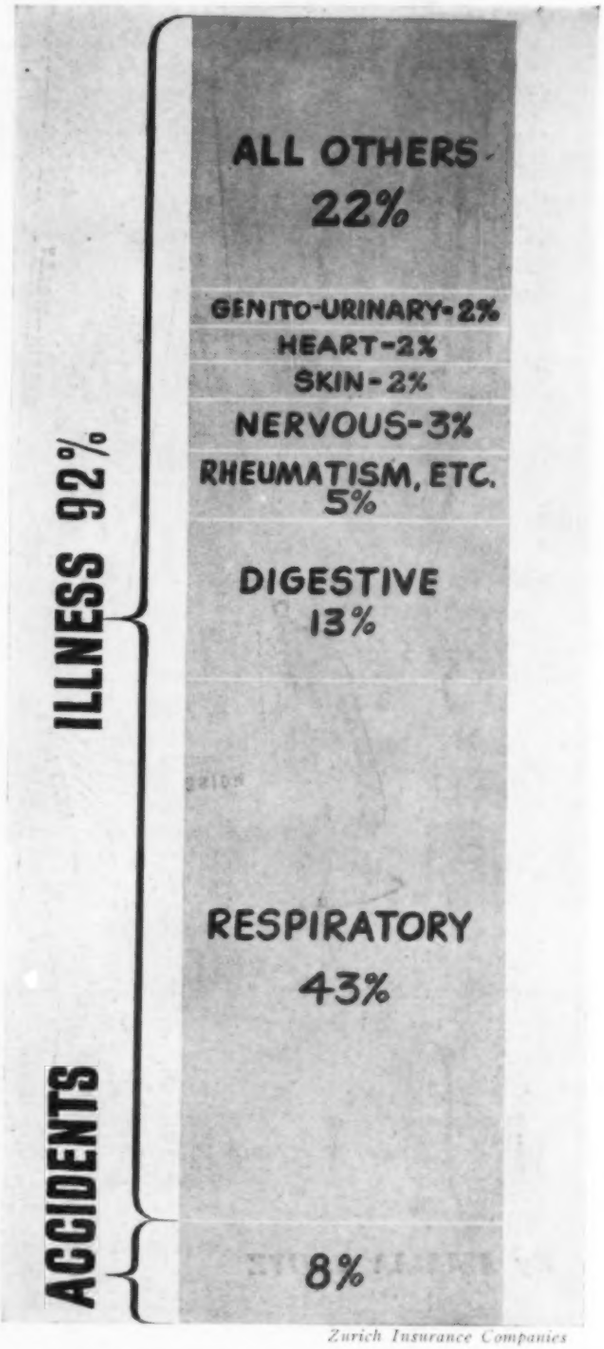
By JOCELYN WALLACE TYLER

GHOST SHIPS that never sail—phantom planes that will not fly—rations that never reach the chow lines in jungle camp and desert post—these are the regular output of those long columns of names in war production plants that add up to the "sick list."

Yet the show must go on—crankshafts for airplane motors, door closers for battleships, Army tent flaps, periscope lenses, buttons to fasten a bluejacket's middy. And if Harry Brown, who stitches tent flaps on the three to eleven shift in a small Midwest tent factory, doesn't get down for a couple of days because he has a bad cold or a touch of indigestion, the output for one factory falls behind just so many tents. Multiply Harry Brown's lost time by that of tens of thousands of workers in war production plants, offices and shipyards who don't get down to work for one reason or another, and you have a rough sketch of the situation which prevents our armies from opening up more fronts faster and shortening the well known "duration."

Lay this mental picture of production losses beside the chart on this page and note another startling fact: just 8 per cent of the production loss from employee disability is caused by accidents; 92 per cent is caused by illness! Bear in mind that this chart has the essential approval of three separate and distinct organizations, and you will view the figures with mounting respect. For the subscribing agencies are: the United States Department of Labor, the American College of Surgeons and the National Association of Manufacturers.

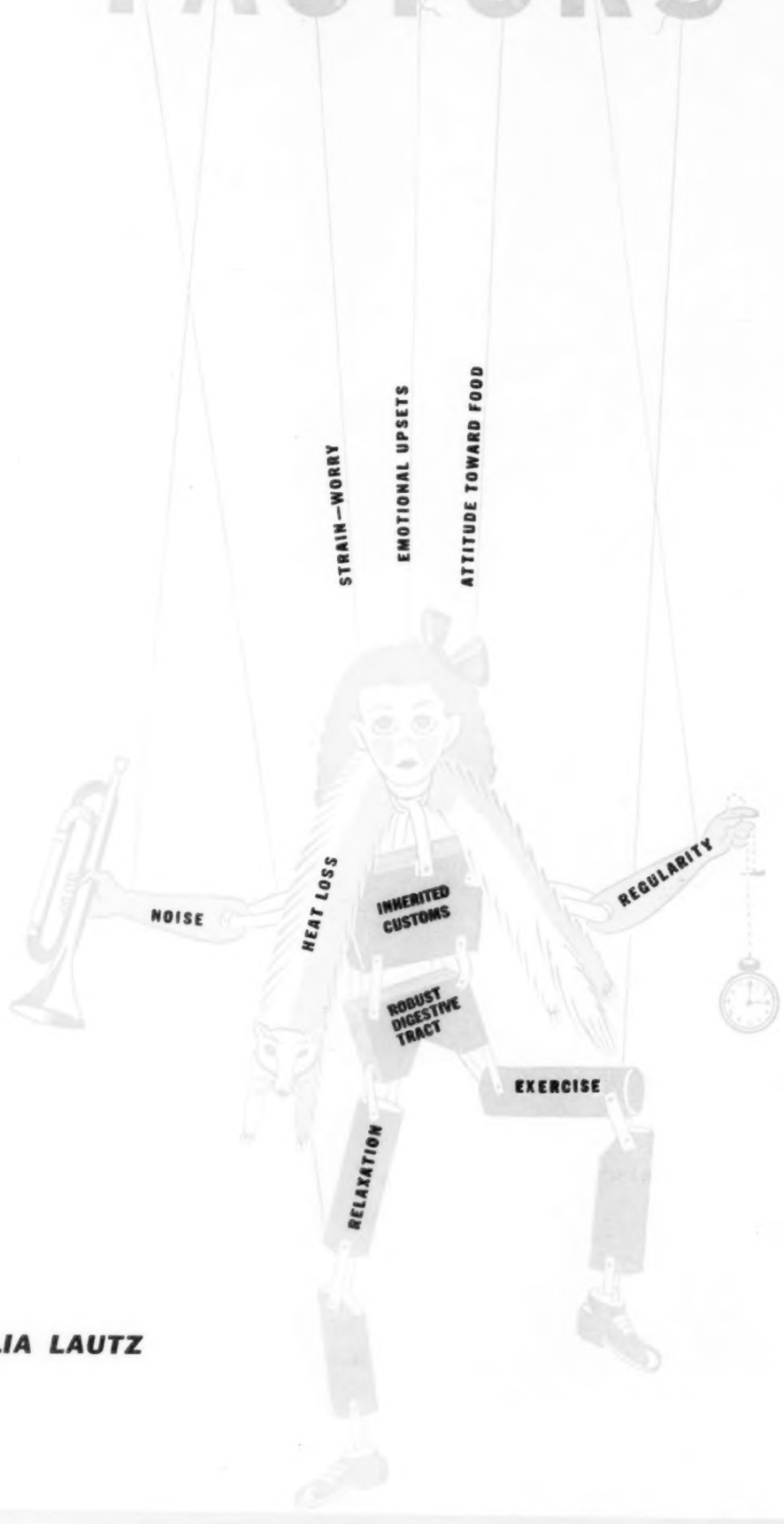
Perhaps an even more convincing illustration of the havoc wrought by illness in war industry is provided by the following report from one American shipyard—an industry, by the way, which offers an ideal setting for accidents. From a total of 4,909 workers employed there during a recent month, 4,704 were at work all or most of the time. The other 205 were laid up. But even in this hazardous occupation, only 6 of the 205 lost time because of accidents; the other *(Continued on page 382)*



Zurich Insurance Companies

Greatest drain on the nation's working manpower is not accident but illness, as shown in this chart indicating the chief causes of lost time in industry

FACTORS IN



By AMALIA LAUTZ

NUTRITION

IN ADDITION to a good diet, many health habits and conditions directly affect nutrition. Illness due to other causes and a body that functions below normal, especially when the digestive tract is not robust, will impair nutrition. Crowding and noise that interfere with sleep and rest change nutritional requirements, as do physically active work and play, and temperature and clothing. Sunshine has a direct effect and fresh air a secondary one. Regularity and time of meals are important as well as the content of food. Emotional upsets, strain and worry take toll. Ignorance and inherited family and community customs may add to the difficulties of the problem. Attitudes established in infancy are sometimes insurmountable.

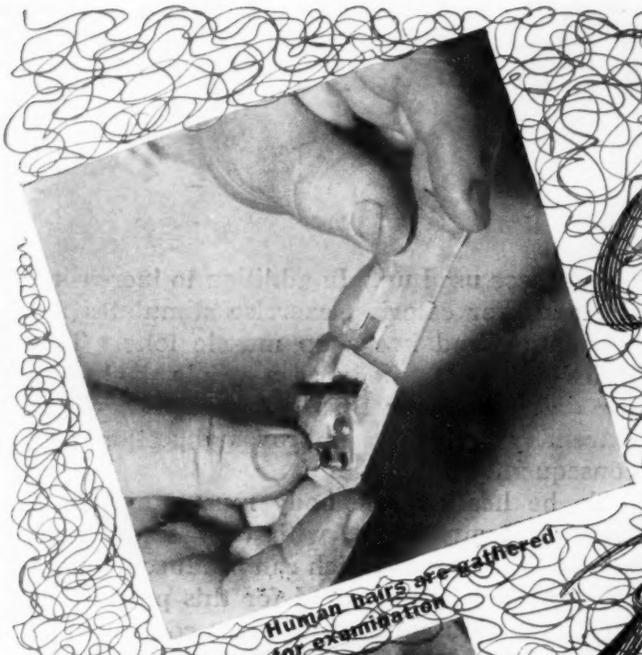
When the body is quiet, as in rest and sleep, it obviously is exerting less energy than during activity. As a result, it requires less fuel in the form of carbohydrate and fat or protein in excess of tissue-building needs. The need for calories is reduced by physical rest and markedly reduced by sleep, especially if sleep is quiet and relaxed. Rest, sleep and relaxation soothe the nerves and so produce better digestion of food eaten, in addition to saving energy. Inactivity helps the body to put on fat and gain weight.

During physical activity in work or play, energy is expended in proportion to the strenuousness of the exercise or bodily work. The need for calories may be doubled or tripled while activity goes on. Carbohydrate stored in the body as reserve is used up, and, if the activity continues without starch or sugar being eaten, the blood sugar may be reduced below a normal level, adding faintness to the feeling of exhaustion. If the energy expended in exercise day after day is greater than the amount taken in the food, the fat of the body will be burned and loss of weight will result unless the food calories are increased to equal those used up. In addition to increasing the need for calories, exercise stimulates the circulation and keeps up muscle tone. This is helpful to the body as a whole, including the digestive tract; thus exercise, unless it is extremely fatiguing, improves digestion and consequently nutrition.

To be healthy, the body must maintain a constant temperature, with only small variations. Fuel foods which can produce measurable calories are required for this purpose as well as for muscular work. In a cool room or out of doors, when it is chilly, the body gives off more calories to the surrounding air than when the air is warm, unless the clothing is heavy enough to prevent such loss of heat. The loss of calories due to cold is much greater if shivering results, for the muscles are used just as they are in exercise, though to a smaller degree. More fuel is burned to produce the shivering and the increased heat resulting from it. Shivering is usually preceded by tenseness, during which we exert some muscular effort in an unconscious endeavor to stay warm. Tenseness and shivering are the cold body's automatic forms of exercise. When we feel cold, we naturally and consciously tend to move about in order to keep warm, and we commonly speak of this as "getting up the circulation." While bodily movement does stimulate the circulation, its first purpose when we are cold is to release more heat by burning fuel. When cold, we need more fuel foods to make up the loss of heat to the surrounding air and for the heat produced by increased muscular effort and tension. Warm weather, warm rooms and warm clothes cut down the calories lost from the body and save them through producing muscular relaxation. Therefore, warmth lowers the amount of fuel food required by the body.

Direct sunshine on the skin—that is, sunshine not shining *(Continued on page 374)*

What's a Hair's Breadth?



Human hairs are gathered for examination

The hair is cut, exposing the cross section

The cross section is measured under the microscope

By S. R. WINTERS

THE HAIRS of your head shall be numbered—and measured," the ancient quotation might be amended to read, now that Dr. Morris Steggerda and Mrs. Ruth Eckardt of the Carnegie Institution of Washington, D. C., have recently completed a statistical study of human head hair.

Using a wool-measuring device developed by Dr. J. I. Hardy of the United States Department of Agriculture, Dr. Steggerda and Mrs. Eckardt are able for the first time to determine quickly and adequately the size pattern of the hairs on anybody's head. Among other details of great value to anthropologists, they have brought to light the fact that the Maya, a Central American Indian, has the largest hair in cross section, and the Dutch have the smallest. The Navajo Indian and the Negro, however, run the Maya a close second in the possession of coarse hair.

The term, "a hair's breadth," signifying an extremely small unit of measure, is often heard. An advertisement describes an object as "one-fifth the width of a human hair." Inasmuch as studies on human hair prove that hairs from different parts of the body differ greatly in their width, such statements, scientifically at least, mean nothing.

Races differ greatly in the widths of their head hairs, the variation ranging from 10 microns to 200. Micron, a Greek word mean-

ing "very small," is the 25,400th part of an inch! Not only do hair widths differ greatly among races, but variations in the size of hairs of one person also have been found to be considerable. For example, one Maya Indian had head hairs which varied in maximum diameter from 25 to 120 microns; in the case of one Negro, the range was even greater—from 20 to 130 microns.

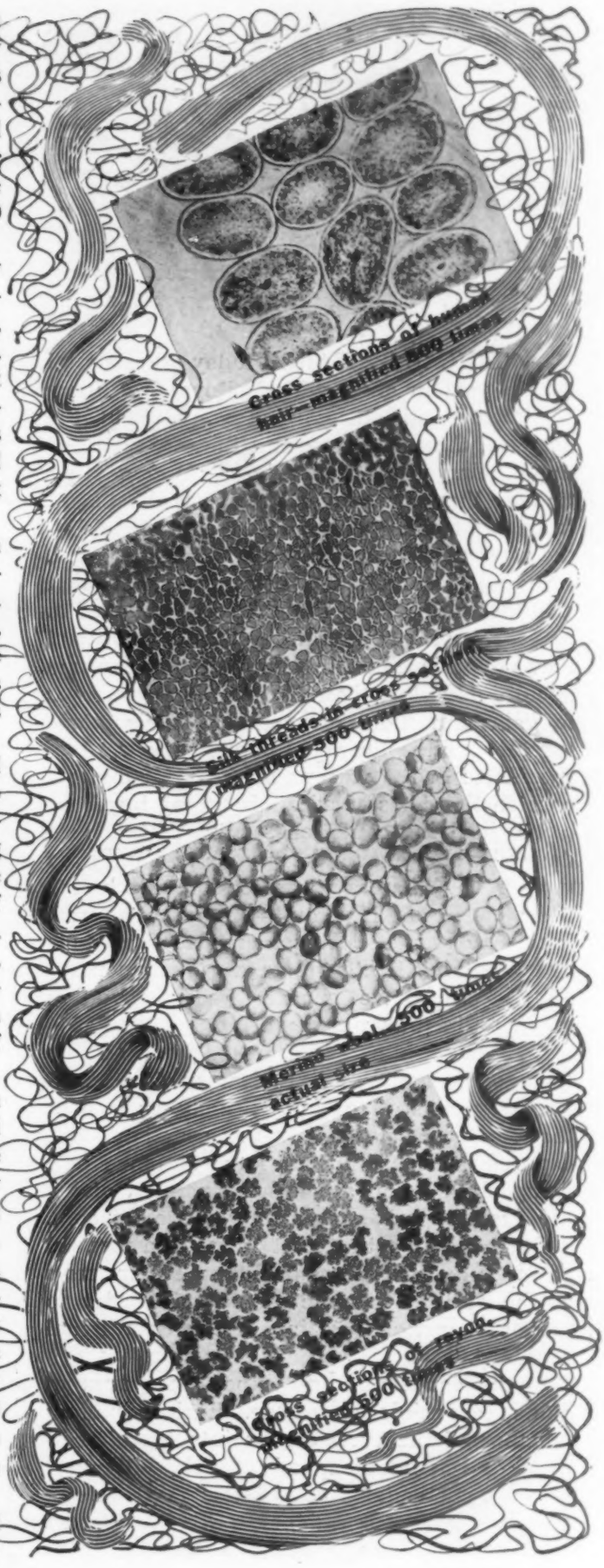
Hairs seldom are true cylinders; that is, they are not absolutely round in shape. On the contrary, a hair is more like an elongated ellipse, or conical shape, in cross section. One hair, consequently, is wider at some points than at others. The greatest difference between maximum and minimum diameter in hair occurs among Negroes. One hair on a Negro's head may be twice as wide at one point as at another.

Males of all races have rounder hair than females for the ages from 9 to 19. These differences are significant for all races but the Dutch. In area, the differences are not so pronounced, although in four of the races the male hairs are definitely larger than the female. Women's hair has more differences in shape than does men's hair, but this is not true for hair size.

Age has a definite effect on the size and shape of hair. Although there is still much to be learned concerning this phase of the subject, the trend appears to be that in young children the hair is small and round. The size of the hair rapidly increases after 5 years of age and remains fairly level until the fifties, at which time there is a decrease. In all cases, however, the variation is great. For Dr. Steggerda's study, only Maya hairs were used, a fact that insured homogeneity, or similarity of the kind of hair structure, of the sample.

The fact that the hair of races differs in thickness has long been a matter of general knowledge, but the difficulty of measuring the breadths of enough single strands to have any statistical importance has been so great that the subject has remained relatively obscure. Under the new method, Dr. Steggerda reports, it is possible to do in ten minutes what formerly required two to three days. Already it has been possible to set tentative standards for races so that samples of hair taken from Indians, Negroes and whites could be classified as belonging to a specific racial group. It is definitely probable that this technic can be applied also to smaller racial units.

The hair-measuring device is a small metal plate, 3 inches wide, *(Continued on page 392)*



Flying Doctors

By A. C. H. PURTHREY

MEDICAL RESEARCH today plays a vital part in air warfare. Royal Air Force medical officers are working in the hospital, the laboratory and the air, many of them being pilots themselves. Among other things, they are investigating problems of fatigue, blacking out, anoxia and "bends"—the most usual complaints of flying personnel.

Flying doctors make observations at high altitudes and record the effects of changes in pressure and temperature that operational crews experience during everyday work. Some doctors have lost their lives in these attempts to gain first hand experience. Their work, together with the continuous research of specialists in the various branches of aircraft construction, has resulted in great improvements in flying conditions. Means have been devised which enable the airmen to stand even greater "g"—the gravity factor found to be the basic cause of "blackout"—than the aircraft itself can stand. Medical experts have thus given Britain's fighter pilots greater maneuverability and have placed British aviation medicine in the front rank.

Doctors with a full knowledge of all the factors governing the respiratory and circulatory systems of the human body, as well as the conditions to which these systems are exposed at high altitudes, have designed new flying clothing on scientific principles, giving the greatest possible protection against cold.

One of the most difficult duties of a medical officer is to detect signs of fatigue in air crews at the earliest possible moment in order to prevent a serious decline in the operational standard.

Flying conditions and experiences are not alone responsible for fatigue. Each individual member of the crew climbs into his aircraft more or less handicapped with the fatigue of his own particular ground efforts, discomforts and personal preoccupations. It is the doctor's job to discover the particular causes.

"Fatigue cannot easily be detected in the ordinary way," a medical officer told me. "The usual medical examination may not yield any information at all; the patient may not know himself that he is fatigued and may fail to report to the doctor. To keep the flying crews fit and prevent any dangerous consequences from excessive strain, we have to watch closely, and a chance remark overheard in the mess may be the only clue."

Overwork, the stress of general conditions, noise, lack of oxygen, exhaust gases, glare or even personal domestic worries and preoccupations cause fatigue, described as "the cumulative result of repeated minor stress." If a man is generally tired he will take a rest and recover after a few hours' sound sleep. Fatigue, however, is beyond the state of tiredness from which normal rest periods can effect recovery.

Medical officers are well acquainted, by study and experience, with the physiologic problems of flying. They live in constant touch with air crews. Messes, crew room, dispersal point, hangars, flight offices, and even off-duty haunts, are their consulting rooms. They do not wait until a case is reported to them; they observe the men and put the brakes on when they consider that airmen are suffering from overstrain or worry. Their motto is: "Fatigue may be unavoidable in the fighting service, but here, as in most cases, prevention is the best cure."

Great strides in the prevention of fatigue have been made recently. New methods of oxygen supply, noise and glare elimination, regulation of temperature and other constructional improvements are being continually evolved. Medical officers give their opinion on the construction of aircraft, tackling the fatigue problem at its roots. Flying clothing is being improved on the strength of reports and suggestions from flying personnel and medical officers.

The desert air war, for instance, has created the problem of adjustment of flying clothing to meet the demands of desert summer heat at low levels and extreme cold at high altitudes.

A new flying helmet, issued recently, eliminates to a great extent engine noise and the effect of vibration, thus preventing temporary deafness, which if not dealt with in its early stages can lead to occupational deafness such as that suffered by some shipyard and mill workers, who, exposed to continuous noise, eventually cannot hear speech in a quiet room.

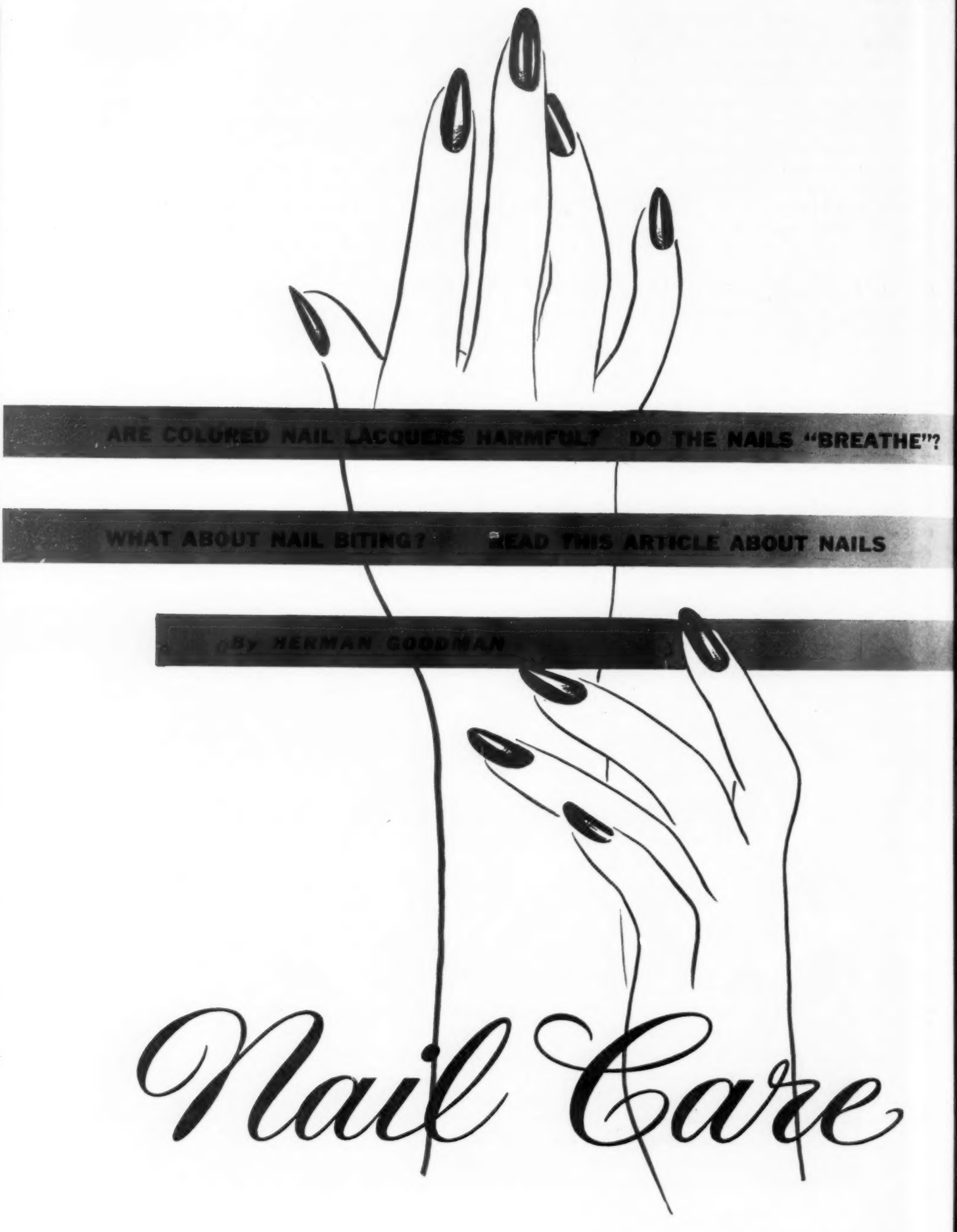
Helmets, goggles and oxygen masks must be well fitted to ensure efficiency. The proper use of oxygen is of paramount importance to avoid anoxia, or "oxygen want."

The medical officer often has to convince flying men that it is not proof of toughness if they choose to fly without oxygen, with an unbuttoned helmet or a half-zipped jacket. Such neglect of the primary precautions against fatigue only tends to endanger the flier's own life as well as those of his crew. Stamina, the capacity for prolonged physical effort and endurance, is not necessarily dependent on outstanding physical development, nor is it wanting in persons of slight build. On the contrary, it is often found that lean, sparely built men have more endurance than their heftier colleagues. In the preservation of this stamina rest, relaxation and personal comfort play a vital part.

Air crews are given at least twenty-four hours' rest a week, subject to operational exigencies, and fourteen days' leave every three months. The Royal Air *(Continued on page 362)*

Royal Air Force pilots drinking coffee at a dispersal point. "Flying doctors" are always on watch to guard against fatigue and strain

British Combine Photo



ARE COLORED NAIL LACQUERS HARMFUL? DO THE NAILS "BREATHE"?

WHAT ABOUT NAIL BITING? READ THIS ARTICLE ABOUT NAILS

By HERMAN GOODMAN

Nail Care

CARE OF THE NAILS usually begins at birth. It is an old wives' tale that the length of the nail determines whether a newborn infant is full term or not; grandmothers and midwives judge by the length of the nail overhanging the tips of the fingers. In some communities and according to some folklore, the nails of the new baby are not cut.

In childhood, the problem of nail care revolves about the habit of nail biting. The psychologist claims nail biting is more or less normal. Nearly all mothers discipline the baby who persists in sucking the nail, or the finger tips when the nails are worn down. In any event, a young boy or girl who has a nail-biting habit following the finger sucking of early childhood should have nail care. Some children are freed of the habit by acquiring pride in the appearance of their nails. This may be done by professional manicure, keeping the nail short without free or hangnail edges. The young girl who is taught to keep her nails in good condition will soon desist from nail biting. Some people claim to have cured the nail-biting habit by the application of tart or bitter chemicals to the nail or finger extremities. This is not always effective; some children come to enjoy the bitterness or saltiness of the average safe chemical applied for this purpose.

Nail care at home may be attempted as soon as the child appreciates what you are trying to do. Visits to a professional manicurist will usually do much more than you can. The introduction to nail care in an effort to stop nail biting should begin with the professional manicurist. The visit to the beauty shop and the attention given by nonfamily people may be the cause of turning the child from the habit, giving the pride of nail appearance mentioned earlier, and it may ultimately lead to normal nail growth.

At what age should the normal young city girl be permitted to apply colored nail lacquers? Many old fashioned mothers and fathers would have them go about with nails the color nature gave them. Some high school principals have reached the newspaper columns by asking girls to return home if they appeared at school with colored nails. This action is unduly harsh. Cosmetic coloration of the nail is a part of modern make-up, a part of the daredeviltry and the "Look out, here I come!" spirit which is normal for young people. The application of color implies good care of the nails. The attempt to maintain social significance through a long, vividly colored talon at the extremity of the finger is understandable today.

I have avoided answering the question at what age colored nails should be permitted, tolerated or encouraged by parents, on the basis of differences between the chronological age and the social age, which depends on so many other factors. Bizarre coloration of the finger nails by young girls usually has its day. Daughters now actually imitate or borrow the coloration applied by their mothers. Every mother knows the retort of her growing girl when admonished regarding nail color application: "But, Mother, you do it, so why can't I?"

Years ago, the only color application for nails was carmine, which gave a pinkish color to the nail. The application was harmless, but it had the great disadvantage of being temporary and uncertain. Powder applications for nails are usually abrasives applied with a buffer to rub the surface of the nail; the friction and the powder base give a gloss of short duration. Powder nail cosmetics, whether white or slightly tinted, require the friction of a buffer. They are now generally limited to barber shop manicures for men.

Nail lacquer coloration of the modern type is actually an outgrowth of research in the automobile paint and polish industry. Noninflammable, modern cosmetic paints for the nail are modifications of the quick drying, noninflammable paints and lacquer finishes for automobiles. The production of a passable nail lacquer is an intricate process. The ingredients must be selected to be harmless, either singly or in combination. The nail lacquer must be stable and must not evaporate in the bottle. It must be quick drying when applied as a film on the nail surface, and it must retain the smoothness attained at the time of application. The nail covering must be firm and resistant to blister formation. It should not crack on small impact nor be easily removed by ordinary solvents such as soap and water or the contents of everyday beverages.

The primary materials have long, technical names and are of deep concern to the fire department. The mixture of solvents, color carriers and other chemicals may not be made in the ordinary factory in the large city. Special places of manufacture under extra special precautions are required by fire department regulations and fire insurance safeguards. Completed nail color *(Continued on page 398)*

THROUGH all the talk and agitation which has revolved about the conserving of food, rubber, metal and oil, the most important of all phases of conservation—human life—has been carried on quietly and effectively by the Safety Section, office of the Chief of Engineers, United States Army.

A careful inspection of what has been accomplished in saving the lives of the men who run every possible risk in carrying out the gigantic construction program of the United States Army is definitely impressive: The accident frequency rate since January 1941 is 40 per cent below that of private construction. Since that time, the Safety Section has saved 370 lives, prevented 30,000 injuries, saved almost 25 million dollars worth of wages for the pocketbooks of American families. Enough man hours of work have been conserved to build a munitions plant capable of producing one and a quarter million pounds of high explosives every twenty-four hours! Every loss in man hours prevented through the efficacy of enlightened accident prevention methods means an important contribution to the speed of the construction program—all of which does its part toward hastening the end of the war.

For 1941 alone, this organized accident prevention work saved construction workers a total of $11,212,760 in wages; the reduction in lost time from accidents was equivalent to the time required to furnish troop housing for 120,000 soldiers, or eight army divisions.

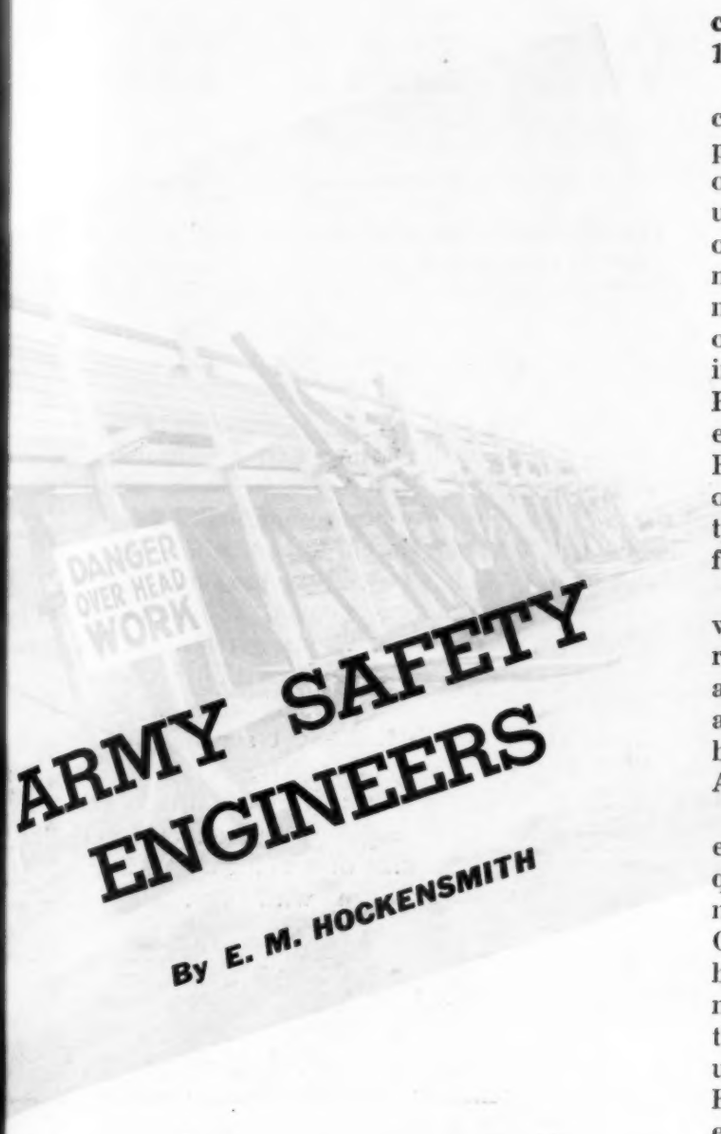
Records for the first quarter of 1942 show an even more striking reduction in the accident frequency rate, with 19.37 lost time accidents per million hours worked, while the 1941 rate for private construction was 35.06. In other words, during the period from January 1, 1942, to March 31, 1942, sixty-eight lives were saved and 5,630 accidents prevented.

It is the first time in history that such a huge building program has been under one control —that of the Office of the Chief of Engineers, headed by Major General Eugene Reybold—with a Safety Section covering the entire activity. Obviously, the achievements in saving human lives and in accident prevention are of vital significance to industry as a whole. Directing all phases of the widespread building program under Maj. Gen. Reybold is Major General Thomas M. Robins, Assistant Chief of Engineers, in charge of construction.

An analysis of several thousand typical cases reveals valuable information with relation to causes and trends on a construction program of this magnitude. Some of the conclusions reached as a result of this survey are:

Steel workers and riggers generally perform the most hazardous work and have the highest frequency and severity rates, running about 50 per cent higher than those for the next most dangerous operation. The frequency and severity rates were 45.9 and 7.8 respectively for steel workers and riggers. Laborers and carpenters had the next highest accident frequency rate, averaging about 31 per cent. Logically enough, the new and inexperienced employee was found to be most susceptible to injury. Forty-four per cent of the workers involved in accidents had been on the job four weeks or less.

Army workmen are fully equipped with protective devices. The Army's gigantic construction work program has been amazingly free of accidents



ARMY SAFETY ENGINEERS

By E. M. HOCKENSMITH

Accidents were most numerous around 10 o'clock in the morning; another peak developed at 3 o'clock in the afternoon, with a percentage slightly less than that in the morning. Approximately 34 per cent of the accidents involved the lower limbs; 24 per cent involved the arms; back injuries constituted 13 per cent of the total. Of the back injuries, sacro-iliac sprains far outnumbered bruises. Head injuries also amounted to 13 per cent of the total accidents.

Another disclosure based on results of the survey is that the use of ordinary types of personal protective equipment could have prevented about 17 per cent of the injuries. Wood, metal and other building materials were the agencies in 59 per cent of the injuries; mechanical equipment was involved in 14 per cent; power driven tools were involved in only 10 per cent.

Some type of unsafe act took place in 88 per cent of all injuries. Failure to take ordinary precautions represented about 40 per cent of the total; 38 per cent were caused by unsafe methods of loading, unloading, storing or handling of materials, tools and equipment. Practically all the accidents due to mechanical equipment resulted from worn out and defective equipment or the use of improper equipment for the job at hand. Failure of supervision in some form was established in 53 per cent of all the injuries. Employees were not trained in safe practices, or the supervisors failed to provide the proper type of supervision on the work being performed.

On all projects employing less than 300 workers, first aid kits and attendants are required to be provided for each 25 employees, and where more than 300 are employed, first aid stations are maintained and administered by first aid attendants qualified either by the American Red Cross or the Bureau of Mines.

On projects employing 1,000 or more workers, a field infirmary is operated, staffed with qualified physicians and registered nurses with modern x-ray and therapy facilities available. On large jobs, the field infirmary is augmented by portable first aid field stations which are moved from place to place in accordance with the whereabouts of the working force. This unique facility, originated by the Corps of Engineers, has been the means of substantially expediting the treatment of minor injuries as well as effecting large reductions in time which would otherwise be consumed in going to and from a single centrally located infirmary.

One of the many striking examples of the value of the safety program is afforded by Camp Roberts, California, a $16,000,000 cantonment project with housing and recreational facilities for 30,000 soldiers, which was completed without a single fatal accident, although there were approximately 8,000,000 man hours of labor. Moreover, there was no accident resulting in permanent injury during the construction, and only 784 minor injuries were reported and treated. This record becomes all the more significant when it is considered that the work included erection of more than a thousand buildings, the placing of 17 miles of road, laying of 105 miles of gas, water and sewage pipe lines, installation of 7 miles of drainage pipes and 36 *(Continued on page 388)*

THE FOOD WE EAT—III

By MIRIAM ZELLER GROSS

MOST OF US eat enough of sufficiently varied foods so that we do not suffer from the more terrifying symptoms of beriberi, scurvy or other deficiency diseases. But few enjoy the "plus" lift of constant well-being and buoyant health associated with a completely adequate diet. Most of us suffer somewhat from food deficiencies.

The "plus" of adequate nourishment, multiplied by millions, can help bring about an early peace. Improper diet, multiplied by millions, can delay peace. The government sees to it that our fighting men get food to keep them in the best possible condition. The home front, fully as important, is up to the housewife. It is her job, your job and my job, to see that American families get all the needed food essentials and in the proper amounts.

Food shortages and rationing probably mean changes in the food habits of the family, headaches in meal planning; they mean that the homemaker must "figure" as never before. But the job can be a good game. In the long run it is more remunerative than bridge—perhaps almost as much fun as the parties given up for lack of gas!

There are two ways of working out meal plans more or less suggested by information given jointly by the Council on Foods and Nutrition of the American Medical Association and the National Research Council.

One way is to proceed on the basis that the average person gets needed food essentials each day from an egg, about ¼ pound of meat, 3 teaspoonfuls of butter or vitamin enriched butter substitute, 4 servings of cereal and bread made from enriched flour, 1 serving of potatoes, 2 of other vegetables (1 raw), 2 servings of fruit (1 raw), and a pint of milk. These total about 1,200 calories, the exact amount depending on the size of servings. Additional calories in accordance with age, size and

RECOMMENDED DIETARY ALLOWANCES

	Calories	Protein Gms.	Ca Gms.	Fe Mg.	Vitamin A I. U.	Thiamine (B_1) Mg.	Ribo-flavin Mg.	Nicotinic Acid Mg.	Ascorbic Acid Mg.
Man (70 Kg. or about 154 lbs.)									
Moderately active	3,000	70	0.8	12	5,000	1.8	2.7	18	75
Very active	4,500	..	...	..	.....	2.3	3.3	23	..
Sedentary	2,500	..	...	..	.....	1.5	2.2	15	..
Woman (56 Kg. or about 123 lbs.)									
Moderately active	2,500	60	0.8	12	5,000	1.5	2.2	15	70
Very active	3,000	..	...	..	.....	1.8	2.7	18	..
Sedentary	2,100	..	...	..	.....	1.2	1.8	12	..
Pregnancy (latter half)	2,500	85	1.5	15	6,000	1.8	2.5	18	100
Lactation	3,000	100	2.0	15	8,000	2.3	3.0	23	150
Children up to 12 years:									
Under 1 year	100/Kg.	3-4/Kg.	1.0	6	1,500	0.4	0.6	4	30
1-3 years	1,200	40	1.0	7	2,000	0.6	0.9	6	35
4-6 years	1,600	50	1.0	8	2,500	0.8	1.2	8	50
7-9 years	2,000	60	1.0	10	3,500	1.0	1.5	10	60
10-12 years	2,500	70	1.2	12	4,500	1.2	1.8	12	75
Children over 12 years:									
Girls, 13-15 years	2,800	80	1.3	15	5,000	1.4	2.0	14	80
16-20 years	2,400	75	1.0	15	5,000	1.2	1.8	12	80
Boys, 13-15 years	3,200	85	1.4	15	5,000	1.6	2.4	16	90
16-20 years	3,800	100	1.4	15	6,000	2.0	3.0	20	100

CHART FOR THE NELSON FAMILY

Members of Nelson Family	Calories	Protein (Grams)	Calcium (Grams)	Iron (Milligrams)	Vitamin A (International Units)	Thiamine(B_1) (Milligrams)	Riboflavin (Milligrams)	Nicotinic Acid (Milligrams)	Ascorbic Acid (Milligrams)
John Nelson, very active, weighs about 170 pounds	4,950	77	0.9	13	5,500	2.3	3.3	2.3	83
Mary Nelson, moderately active, weighs 123 pounds	2,500	69	0.8	12	5,000	1.5	2.2	15	70
Four-year-old Ann	1,600	50	1.0	8	2,500	0.8	1.2	8	50
Fourteen-year-old Jack	3,200	85	1.4	15	5,000	1.6	2.4	16	90
Joan Henderson, very active, weighs about 135 pounds	3,300	66	0.9	13	5,500	1.8	2.7	18	77

activity may be added from other foods. One will not go far afield in sticking to this plan for working out family meal schedules.

The other plan is somewhat more complicated, especially at the start. Its advantages are probable economies, closer approximation to individual needs and the added knowledge and pleasure gained through developing menus on a more scientific basis.

As a beginning, let us look at the table of caloric and food essential requirements prepared by food scientists of the American Medical Association and the Research Council.

Now let us consider the food requirements of the Nelson family. John Nelson, the father, weighs about 170 pounds and has a defense job requiring heavy physical exertion. Mary, Mrs. Nelson, is moderately active. Other members of the family are 4 year old Ann, 14 year old Jack and Joan Henderson, Mary's sister, who is making her home with the Nelsons while her husband is in the Army. Joan works in an airplane factory.

From the first chart, we develop the chart for the Nelson family.

In comparing the chart of the Nelson family with that of "Recommended Daily Allowances," we see that most allowances increase or decrease proportionately for small or larger individuals. Allowances for thiamine, riboflavin and niacin are proportional to caloric intake. As for children, their needs will be proportionately larger or smaller according to size and activity. Allowances in all cases are based on the needs of healthy individuals. Illness may make special demands. Pregnancy, lactation and growth also have their particular requirements.

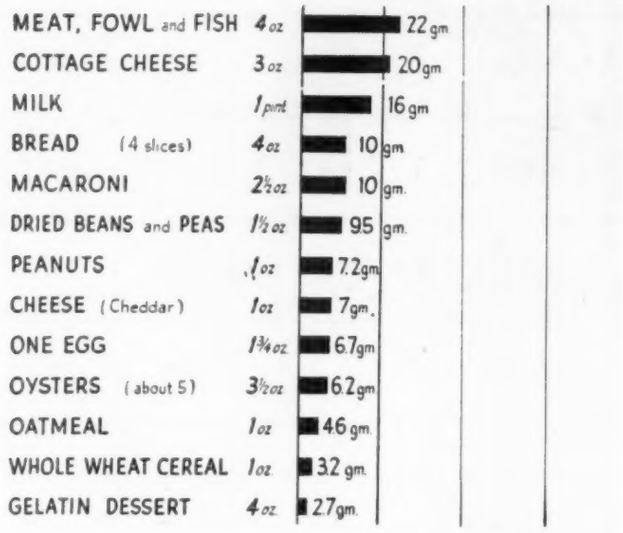
For ease in interpreting tables it may be mentioned that a kilogram equals 2.2 pounds. A milligram of thiamine, or vitamin B_1 equals 333 international units, and one milligram of ascorbic acid, or vitamin C, is equal to 20 units, either international or U. S. P. For ordinary purposes we may figure that a teaspoon holds about 4½ grams and an ounce represents the contents of 6 teaspoonfuls.

The vitamin D requirements of the Nelsons are not noted in the chart, because ordinary foods cannot be depended on to supply this vitamin. Vitamin D milk, either fluid or evaporated, cod liver oil and other fish liver oils and concentrates as well as other pharmaceutical products contain vitamin D. Labels should always be consulted for vitamin content, and you can be certain the product is properly standardized if it bears the label of the Council on Foods and Nutrition of the American Medical Association.

Knowing how much of this and that food essential is required each day by each Nelson, let us see which foods Mrs. Nelson will consider in working out her menus. First, here are foods that are reliable sources of protein:

FOODS AS SOURCES OF

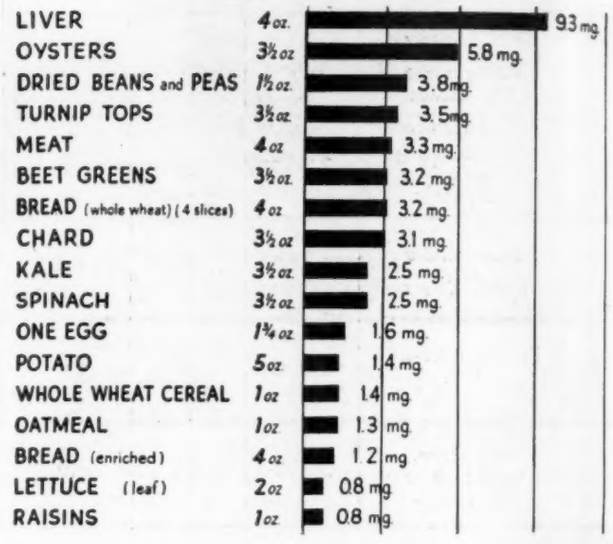
PROTEIN



Animal foods, it will be noted, are the best sources of good quality protein. Mr. Nelson will get about 22 grams, or slightly less than one third of his daily allowance, from a ¼ pound serving of meat, fowl or fish. In these charts, the vertical line at the right represents the full adult male allowance of the nutrient; other vertical lines show 25, 50 and 75 per cent of the allowance.

FOODS AS SOURCES OF

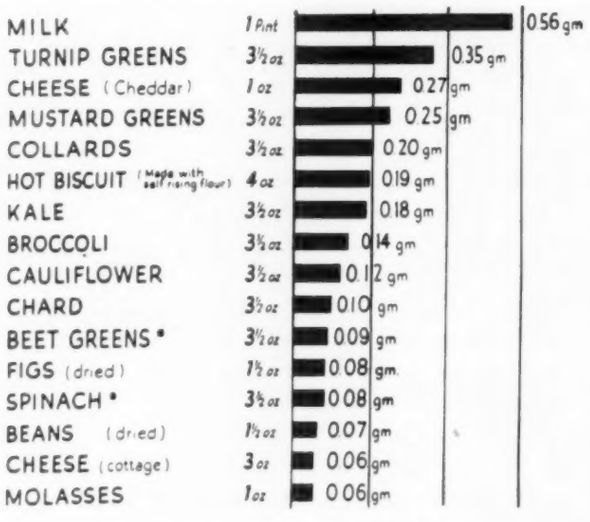
IRON



This chart shows that Mrs. Nelson will find beans, peas, meats, green leafy vegetables and nutritionally unimpaired cereals the best sources of iron. In general, a well balanced diet with meat, eggs, colored vegetables and whole wheat grains taken in adequate amounts provides 12 milligrams or more of iron daily.

FOODS AS SOURCES OF

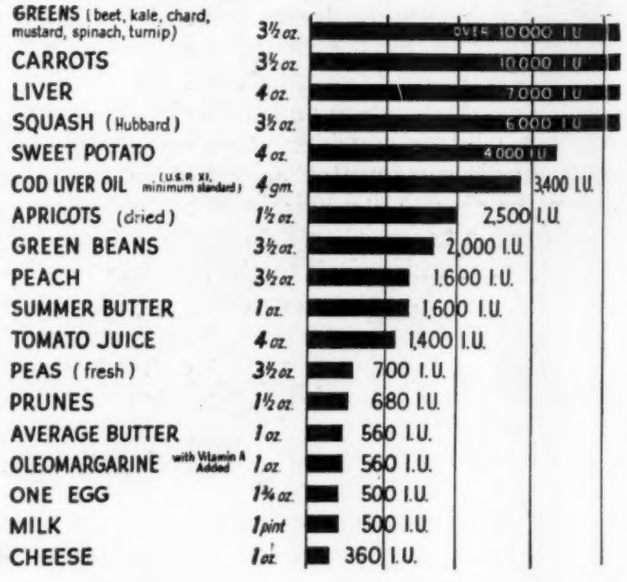
CALCIUM



Mrs. Nelson will find milk the most important common source of calcium for her family, but she will find other foods to help make up the day's quota in this most important body mineral. She will note the particularly high calcium requirements of Jack and try to provide better than a quart of milk a day for him. Hot biscuits made with self rising flour, "phosphated" by adding calcium phosphate salt, will probably be hailed with pleasure by the Nelson family and add significant amounts of calcium to their diet. Other foods which are sources of calcium will be noted in the above chart.

FOODS AS SOURCES OF

VITAMIN A



Green, leafy and yellow vegetables are good sources of vitamin A. Milk, cream, butter, eggs and liver are outstanding sources, and more than one tenth of the amount needed each day by John Nelson, Mary Nelson or Joan Henderson is contained in each ounce of a vitamin A enriched oleomargarine.

(Continued on page 363)

The HIDDEN ELEMENT

that means Better Nutrition

There's no need to tell you about the importance of MILK in *better nutrition*. But we would like to tell you about the "Hidden Element" in *Sealtest* Milk.

This "Hidden Element" is the result of all the research, services and standards of the well-known Sealtest System of Laboratory Supervision.

Part of it is constant Sealtest *Laboratory Research*. Part of it is an exacting set of Sealtest standards for quality and purity that are rigidly enforced in every Sealtest Dairy.

Part of it is Sealtest good-housekeeping. Imagine one hundred and fifty different inspections of plant housekeeping alone! Utensils scrubbed and polished until they glisten; floors so spotless you almost hesitate to walk on them.

All these and many more go to make up the *extra* value . . . the HIDDEN ELEMENT . . . in every bottle of Sealtest Milk. And you will find this milk sold in thousands of communities under the red-and-white Sealtest Symbol.

Sealtest MILK

Sealtest, Inc. and its member companies are divisions of National Dairy Products Corporation

• • •

TUNE IN THE SEALTEST PROGRAM, THURSDAY EVENINGS, NBC NETWORK.

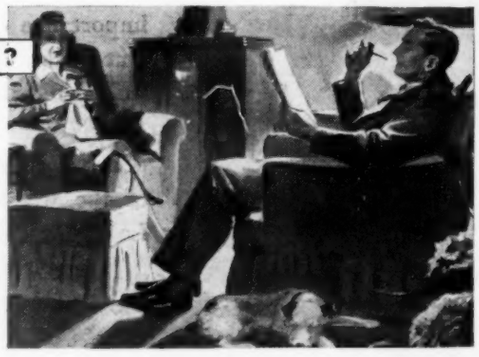
Are you getting enough of these?

TODAY, we owe it not only to ourselves, but to our country, to keep physically fit. Every man, woman, and child should have a health program—one carefully adjusted to his physical condition, age, and working hours. It should embrace *sleep, rest, recreation, exercise, and a nutritious diet.* Below are suggestions concerning the first three of these requisites of good health.

SLEEP?

Sleep is a great healer. It eases the work of vital organs, gives the body time to mend worn-out tissues and build new ones. Most adults require eight hours of sleep daily. Children need more, especially in the early 'teens. Refreshing sleep comes more easily when you avoid excitement or hard physical or mental work before bedtime. Daytime sleepers should be shielded from *light* and *noise.*

REST?



Enough sleep—especially tossing, fretful sleep—is not necessarily enough rest. Have you ever tried to relax completely? When you are completely relaxed, asleep or awake, the restorative powers of the body can get at their work of overcoming fatigue. The habit of complete relaxation for even brief periods is worth while cultivating. It helps conserve energy for *important* tasks.

RECREATION?

Uncle Sam plans adequate recreational facilities for our armed forces. Recreation is equally important for civilians. Hobbies, sports, music, are excellent. Try to get some of your recreation out of doors. For example, *plant a Victory Garden!* It is not only healthful recreation, but a contribution toward winning the war.

Write for the Metropolitan leaflet, 53-Z, "Blueprint for Health."

MORE NURSES ARE NEEDED! The health of our armed forces, our workers, our families, depends in large part on skilled nursing care. High school graduates and college girls! . . . America needs 65,000 of you to enter schools of nursing. Federal funds are available for scholarships for qualified students. Write the National Nursing Council for War Service—1790 Broadway, New York City, for information.

COPYRIGHT 1943—METROPOLITAN LIFE INSURANCE CO.

Metropolitan Life Insurance Company

(*A MUTUAL COMPANY*)

Frederick H. Ecker,
CHAIRMAN OF THE BOARD

Leroy A. Lincoln,
PRESIDENT

1 MADISON AVENUE, NEW YORK, N. Y.

Flying Doctors

(Continued from page 353)

Force has several rest homes for flying personnel where they get all the amenities of a country mansion for a few days, relax completely and recoup their energy and stamina according to their specific duties in fighters, bombers or flying boats. Many families all over Britain have offered hospitality to airmen to give them a change of environment, rest without talking "shop" and personal comfort that soon brings them back to their normal state of health.

Symptoms of fatigue, such as headaches, the constant feeling of not being up to the mark and falling off in operational capacity, are immediately observed by medical officers, who are familiar with psychologic treatment as well as pure medical science.

An airman—this applies to men on the ground staff as much as to flying crews—who is obviously suffering from strain finds in the medical officer a personal friend anxious to assist him in every respect. The doctor usually knows most of the flying men of his squadron by name. By studying their records, documents and flying logs, he can always keep himself informed of their progress. He is alert to the fact that their domestic affairs are often as much the cause of fatigue as operational strain.

To avoid air sickness flyers are urged to eat their meals at leisure an hour or so before taking off, avoiding fats and alcohol. Of equal importance is sound rest to ensure maximum resistance against fatigue, and the medical officer usually insists that all personnel get at least eight hours' sleep in twenty-four, preferably at one stretch, to prevent a decrease of mental and nervous energy which, if continued daily, might result in a gradual and steady fall in efficiency.

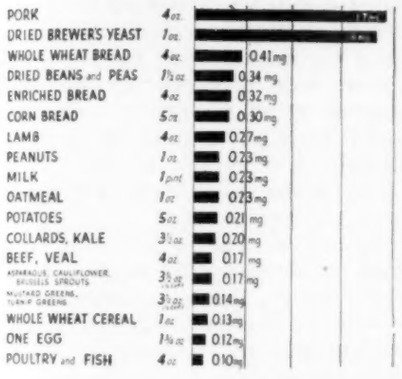
The preservation of flying morale and elimination of signs of staleness of the personnel is as important as the efficient servicing and maintenance of the aircraft they fly. Britain's doctors are doing everything possible to ensure the continuous A-1 condition of the nation's air crews. And the record of the Royal Air Force is proof enough of their success.

THE FOOD WE EAT—III

(*Continued from page 360*)

Now for the thiamine, or viatmin B_1, needs of the Nelson family:

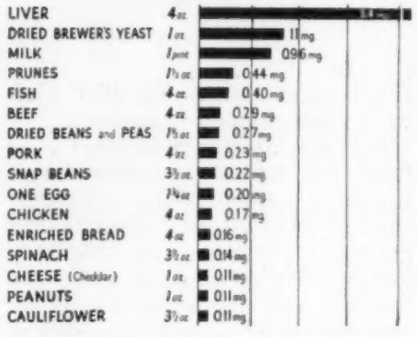
FOODS AS SOURCES OF THIAMINE
(VITAMIN B_1)



We see that a single pork chop, even after frying, will give about three fourths of the thiamine John Nelson needs for any one day. Enriched bread is another good source. Oatmeal, incidentally, in the above chart is given in terms of dry weight. When cooked, added water will make a serving about four times larger.

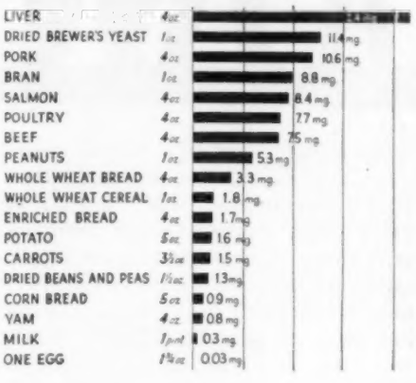
Mary Nelson now considers sources of riboflavin, another of the vitamin B group. She finds milk the most important common source and is glad to find its riboflavin is not easily destroyed by heat. But light may destroy the vitamin, so she resolves not to allow her bottles of milk to stand about in the early morning sun which floods the Nelson back porch where their milk is delivered. She finds also that riboflavin as well as thiamine may be lost if she does not use the water in which meats and vegetables are cooked.

FOODS AS SOURCES OF RIBOFLAVIN
(VITAMIN G)



Now to consider niacin, or nicotinic acid, another of the vitamin B group:

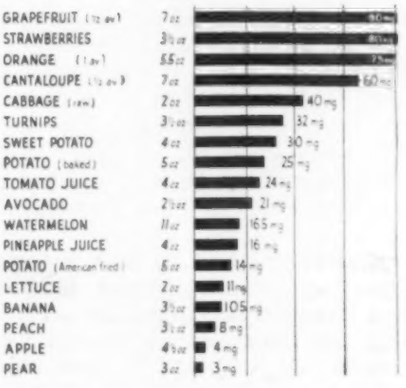
FOODS AS SOURCES OF NIACIN
(NICOTINIC ACID)



Mary Nelson sees that in general meats are the most important common source. She also notes that dried yeast is a good source and thinks she will add some to peanut butter, from which she makes sandwiches, using either whole wheat or enriched bread.

Mrs. Nelson studies ascorbic acid or vitamin C sources and is pleased to find so many. She discovers that half a grapefruit or a serving of strawberries gives more than the usual daily requirement, that a small glass (about 4 ounces) of orange juice provides from 48 to 72 milligrams. An equal amount of canned grapefruit juice gives about 42 to 54; tomato juice from 18 to 30, and pineapple juice from 12 to 18. Grape juice, cider or apple juice usually provide little vitamin C.

FOODS AS SOURCES OF ASCORBIC ACID
(VITAMIN C)



Mrs. Nelson also notes that potatoes are good sources of vitamin C. Even boiled or baked they contain fair amounts, although whipping them for mashed potatoes may result in complete destruction of C through oxidation. The vitamin is also destroyed by heat and extracted in cooking water.

Mary Nelson has now studied the charts giving dietary requirements for her family. Also, in working out menus she will in general try to see that the Nelsons eat about the same number of calories in both fats and carbohydrates, with about 15 per cent in proteins.

She gives some thought to iodine, sodium, potassium and chlorine requirements. Then she decides to purchase iodized salt whenever she buys salt, her physician having told her that usual iodine requirements are met through the regular use of iodized salt. While seafoods are good sources, they are usually used so infrequently that they cannot be depended on to supply regular needs for iodine. Her physician also tells her that the diet already selected for the Nelsons will contain enough sodium, potassium and chlorine for ordinary needs.

Mary promises herself that each Nelson will report to Dr. Stevens, the family physician, at regular intervals for physical checkups. This will enable him to suggest changes in diet should some condition require such changes.

Mrs. Nelson, of the U. S. A., has a tremendous job. If she does it well she need not hesitate to look even a General in the face and know that she as well as he is making a worth while contribution toward the right and early end of war!

"We Won't Starve"

By PHOEBE MAYO WALTERS

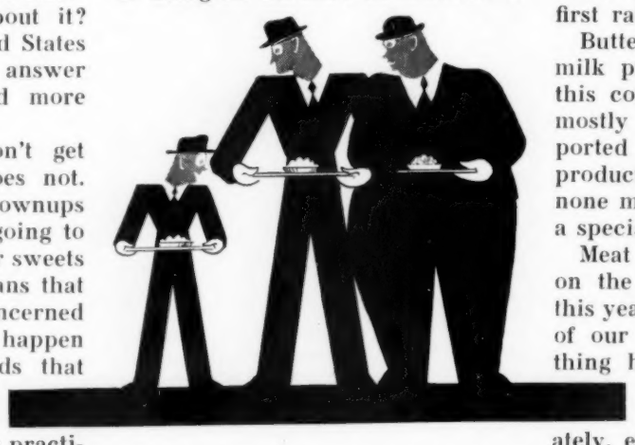
IT'S GOING to be tough—but we won't starve! Neither we nor our soldiers, neither our Allies nor even our enemies—once this war is won. But right now in the occupied countries and Spain it is thought that half the people are starving, and by the time the war is over many hundred million people throughout the world will be starving. What can we do about it? What answer can the United States give to that challenge? The answer is rationing, rationing and more rationing!

Does that mean we won't get enough to eat? No, it does not. But it does mean that we grownups as well as the kiddies are going to eat our spinach first, and our sweets afterward—if at all. It means that our government is not concerned with the kinds of food we happen to like, but with the kinds that make us tick. And we shall also find, to our surprise, that there are substitutes for practically all the foods we thought we couldn't do without. It may surprise us even more, in the days to come, to find ourselves eating those substitutes and liking them.

The Committee on Foods and Nutrition of the National Research Council has, after thorough study, devised a "Washington nutrition yardstick." If we are to measure up we shall have to eat more dairy products, meat, fish, fruits and green or yellow vegetables than ever before. And Uncle Sam is about to make sure that of these we each have our share—no more, no less. Otherwise the strong, who need them less, would get the most, and the weak, who need them most, would fare badly indeed.

In the first world war the complaint was made that Americans had acquired a lot of silly ideas about what is fit for food and what is not. But taste is, after all, mostly a matter of habit. We like what we are accustomed to eating.

Milk has always been used as a food, but before pasteurization it was also, unfortunately, a dangerous carrier of disease. Now, thanks to Pasteur, milk unquestionably tops the list. The quart a day for children and pint a day for adults is doing its bit here in America to make us what we are—that is, those of us who will listen and can afford it. Unfortunately that amount is more than many family budgets will allow. But why insist on liquid milk? Dried whole milk is cheaper, and dried skim milk, which keeps best of all, could be sold for much less than the cost of liquid whole milk. If you don't like the taste of this reconstituted dry milk, why not use it for cooking? One of its great advantages is that it can be mixed with other foods in cooking so that the consumer gets it painlessly. The taste of custards and other cooked foods made with dry milk differs not at all from the taste of similar products made with liquid milk.



Butter is a luxury made from milk. Delicious to taste and therefore considered a necessity in this country, as are many other luxuries, it is not worth the milk necessary to make it unless there is enough milk for both purposes. If the great dairy resources of our country are overtaxed by the demands made on them for enough milk for all, then butter will probably go by the boards. But there is oleomargarine to fall back on—a good, cheap substitute. It may not be the Clark Gable of the dairy trade, but it's a first rate performer.

Buttermilk, cheese and whey are milk products rather neglected in this country, the latter being used mostly in poultry feeds. It is reported that in Germany no milk products may be thrown away, and none may be used for feed without a special license.

Meat is the next important item on the yardstick, and our supply this year is the largest in the history of our country. Thus could anything have startled us more than suddenly to find the meat counters bare? Immediately, every one became meat conscious. It was as though the war had suddenly hit us below the belt. Those of us who were bluffing when we said we could take it had our bluff called then and there. But most of us weren't bluffing. It was just that we hadn't quite appreciated the Herculean task our government has undertaken in trying to regulate the supply of essential foods. When we consider the number of training centers in our country, each housing and feeding hundreds of men, the shifts of our population to the industrial areas, and the boats constantly leaving our ports filled with food for our Allies we are neither surprised nor impatient.

Meat is essential to our diet because of its high protein content. However, it is not the meat but the protein which is essential, therefore other foods high in protein can be made to do as well. One of these

Pork...

and its advantages in WARTIME MEALS

FOR the remainder of the war period a goodly portion of our civilian meat supply will have to be pork. Make the most of the supply available, for pork is an excellent wartime food.

First of all, pork is tasty. Its different cuts can be prepared in many delicious ways.

Secondly, pork presents several unique nutritional properties. It contains almost twice as much fat as other meats. Fats are energy foods and are needed for nutritional health. In view of the rationing of fats, the high fat content of pork (35%) is doubly important. Pork is almost as high in protein content as the other meats, and its proteins are biologically adequate, complete.

Its mineral content makes pork a good source of iron, copper, and phosphorus.

Pork leads all foods in thiamine (vitamin B_1) content. It also contributes nutritionally important amounts of riboflavin and niacin.

Like all meats, pork stimulates the appetite and prompts the eating of other foods at mealtime, thus facilitating a better balanced dietary.

Last not least, pork is high in satiety value, and is from 96% to 98% digestible.

ESSENTIAL NUTRIENTS IN PORK*

	Protein	Fat	Vit. A I. U.	Vit. D I. U.	Vit. C Ascorbic Acid mg.	Thiamine mg.	Riboflavin mg.	Niacin mg.
Muscle Meat	16%	35%				1.5	0.24	8.0
Heart	17.1%	4.8%			4.0	0.6	0.12	6.5
Kidney	15.5%	4.6%			14.0	0.5	1.96	10.0
Brain	11.7%	9.0%			18.0			
Tongue	16.8%	15.6%						
Liver	21.3%	4.8%	9,850	44.5	24.0	0.5	2.70	19.0

**Average values per 100 Gm. fresh substance*
Based on Waisman and Elvehjem "The Vitamin Content of Meat"

The Seal of Acceptance denotes that the statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

ACCEPTED AMERICAN MEDICAL ASSN. Council on Foods

American Meat Institute
CHICAGO

A

Frequently Used

REMEDY

▼

ARM & HAMMER Baking Soda and Cow Brand Baking Soda are pure Bicarbonate of Soda—a dependable and frequently used home remedy.

If a physician prescribes Bicarbonate of Soda for relief from hyperacid types of indigestion, Arm & Hammer, or Cow Brand, Baking Soda may be used because these two famous old products are classified as Official Remedies by the Council on Pharmacy and Chemistry of the American Medical Association. Both are U.S.P. products. They are effective as a cleansing gargle or to ease the pain of minor scalds and burns.

For use in emergencies in the home keep a supply of Arm & Hammer, or Cow Brand, Baking Soda in your medicine cabinet. And, as your first aid training courses suggest, keep a reserve also in your emergency first aid kit.

The cost of these dependable old Baking Soda brands is low—just a few cents a package—at the grocer's.

Business Established in 1846

CHURCH & DWIGHT CO., Inc.
10 Cedar Street New York, N.Y.

is fish, and I don't mean the fancy fish only—American streams and fresh water lakes are full of rough fish, the carp for instance. This fish, when smoked, is a delicacy in Europe.

And what about our feathered barnyard friends? We've heard, these many years, about the goose that laid the golden egg; now, both the eggs and the hens that lay them are golden! Rich in protein and to our taste, they leave nothing to be desired—except more.

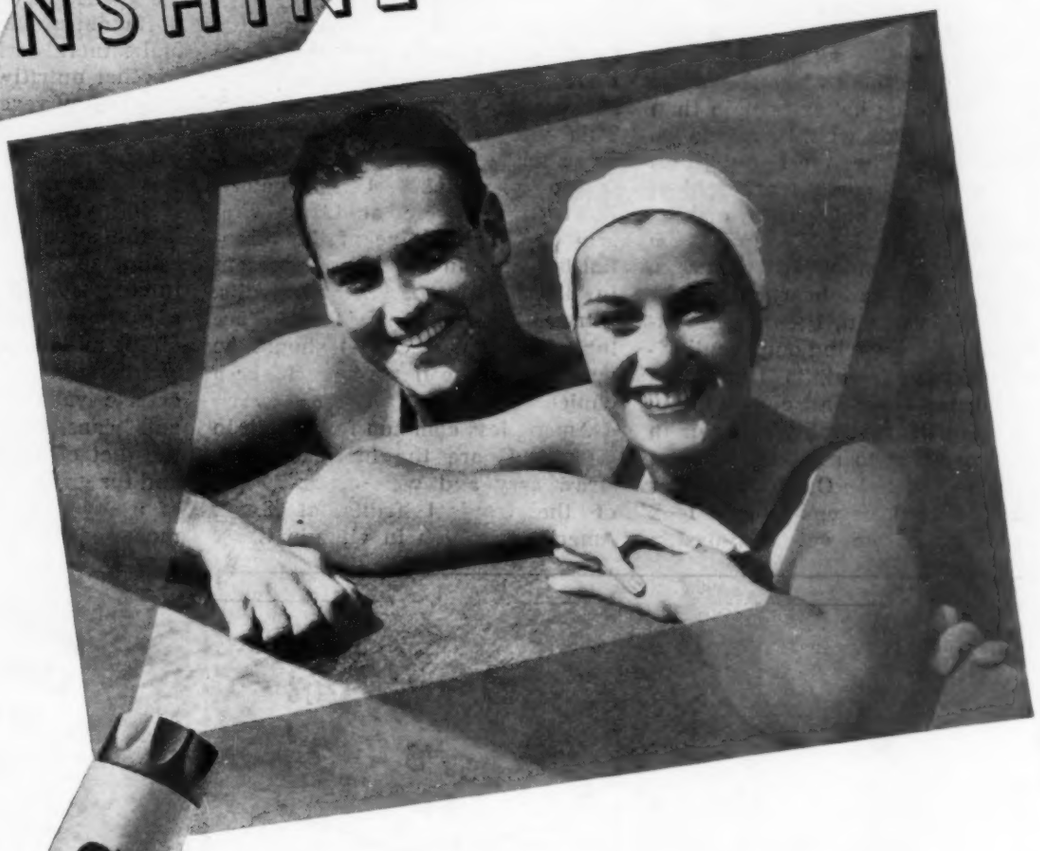
Nor need we longer look to Switzerland for our cheese, because Wisconsin and Minnesota are now the Switzerland of America, mountains or no mountains! There is a Swiss Colony in Monroe, Wis., making cheese that looks and tastes more like Swiss cheese than Swiss cheese itself. The European peasant makes much of his cheese. It represents, in fact, a substantial portion of his diet and undoubtedly contributes to the proverbial vigor of the pastoral peoples of Asia and the Balkans. Perhaps during this war our domestic cheese will come into its own. From the simple cottage cheese to the fancy Swiss, it equals in quality any in the world and could be used to great advantage, being superb as a food because of the high quality of the protein it contains.

Other foods high in protein are those of the dry bean family—white, navy and kidney beans, black peas and so on, and also the soybeans, peanuts and peanut butter. Perhaps many of us associate soybeans with feeding pigs back on the farm. They say the Japs eat fresh soybeans from bags, like candy, and that in Germany cultivation of the soybean and its processing for human food has become a major industry. A sausage known as bratling, made with skim milk and soybeans, forms a mainstay of the German army ration.

Perhaps they have the jump on us at that, because soybeans are extremely high in protein, and it has been estimated that the cost of production of protein from soybean plants is about one tenth of what it would cost to produce an equal amount of protein in meat. Even at present the relatively small crop of soybeans and peanuts raised in this country would provide 70 per cent as much protein annually as does our meat supply.

SUNTAN WITHOUT HARM VIA

FILTERED SUNSHINE



SUTRA*, the selective sunfilter cream, quickly and easily applied before exposure to the sun, will shield against harmful rays. Spectroscopic tests prove that the exclusive filter ingredient used in SUTRA will permit entrance of desired tanning rays.

SUTRA is not greasy . . . will not stain . . . is delicately scented. Made as carefully as a fine pharmaceutical preparation. . . . Apply a thin layer quickly and easily before exposure.

• • •

Regular sizes: 25¢, 65¢, and $1.00—
At drug and department stores.
Literature on request.

Accepted for advertising in the Publications of the American Medical Association

SUTRA SUNFILTER CREAM

Artra Cosmetics, Inc., Distributors
Bloomfield, New Jersey

*Reg. U.S. Pat. Off. U.S. Pat. Pend.

Yeast has long been known to be a rich source of vitamins of the B complex, and now we find it to be phenomenally high in protein also. Unfortunately, it tastes terrible! But interestingly enough, it has been found that yeast can be incorporated in peanut butter, the taste being disguised by that of the peanut. This type of peanut butter is now being offered to our armed forces as an optional spread.

One thing more we shall do well to remember. There is no evidence to support the theory that when we buy expensive cuts of meat we are buying more or better protein than the cheaper cuts would provide us. Furthermore, the most nutritious parts of every carcass are seldom chosen at all, but go to making fertilizer or feed. We spurn the blood, lungs, stomach, pancreas, kidney, brain and heart. But our loss is Fido's gain, because American packers, knowing our peculiarities, put these tidbits into their canned dog food, and consequently it is often demonstrably superior in nutritive value to most of the meat they can for us! Our distaste for these internal organs is not logical, because we eat the oyster, clam and crab with relish and profit greatly by the fact that its internal organs are included. So let's be open minded about the different cuts and kinds of meat, try new ones, and key our purchases to what the market has to offer. When the market is bare, or almost bare, we can combine small quantities of meat with bulky or mild flavored foods, and use gravies and drippings to spread the flavor far and wide.

Fruits have always been used for food, partly because they were there for the picking, and partly because of their tempting flavors. This was fortunate for mankind, since fruits also are on the Washington yardstick. Unfortunately, however, ascorbic acid, or vitamin C, which is one of the essential blessings in fruit, is not present in large amounts in all fruits. Citrus fruits and the tomato are tops for vitamin C and should be our first choice if we must make a choice.

Among less common foods rich in vitamin C are the black currant, strawberry and watercress. Some of the tropical fruits of South America are high in vitamin C but few of these are available to us at the moment. The guava, however, is grown in California and is especially high in this vitamin. Though different from the fruits we in this country are accustomed to, it has a pleasant taste, and juice made from it is delicious. Dried guava provides a powder of pleasing odor and practically no taste which is high in vitamin C.

Vegetables also are definitely on the yardstick, but they vary in importance; some excel in vitamins and minerals while others are high in other nutritive values. The green and yellow vegetables such as spinach, carrots, beet greens and other colored plants and roots are rich in vitamins. Carrots are especially high in carotene or vitamin A, as is the sweet potato. It has been estimated that 10,000 acres planted in carrots would yield enough units of vitamin A to supply a population of 100 million people for forty days.

Among the vegetables high in caloric value are the potato, peas and beans. These are important in the diet of active men and women and for growing children. But those of us on the home front who lead more sedentary lives will do well to

New! Crisper! Delicious nut-like flavor, plus 3 Extra Benefits!

Yes, Post's 40% Bran Flakes are new, crisper, more delicious than ever because of an improved process that makes their famous sweet-as-a-nut flavor better than ever. And Post's Bran Flakes—the *only* nationally advertised, nationally accepted bran flakes—give you these three extras:

1. They provide enough bran to help prevent constipation due to lack of bulk in the diet.
2. They supply important whole-grain nourishment and minerals of whole wheat.
3. Post's Bran Flakes provide additional thiamin—50 U.S.P. units per ounce, or 15% of an adult's minimum daily requirement.

A Product of General Foods

Your Doctor Needs Your Help

COPYRIGHT 1943, THE UPJOHN COMPANY

Your doctor is working under extraordinary pressure these days. Besides caring for his own patients, he must look after the patients of his colleagues who are serving our armed forces. Physical examinations for the local Selective Service Board may also have been added to his duties. If suddenly expanded war industries have brought a host of war workers to your community, he is sharing the burden of protecting their health. Altogether, his day is not long enough for him to do all these vital jobs—unless he has your help.

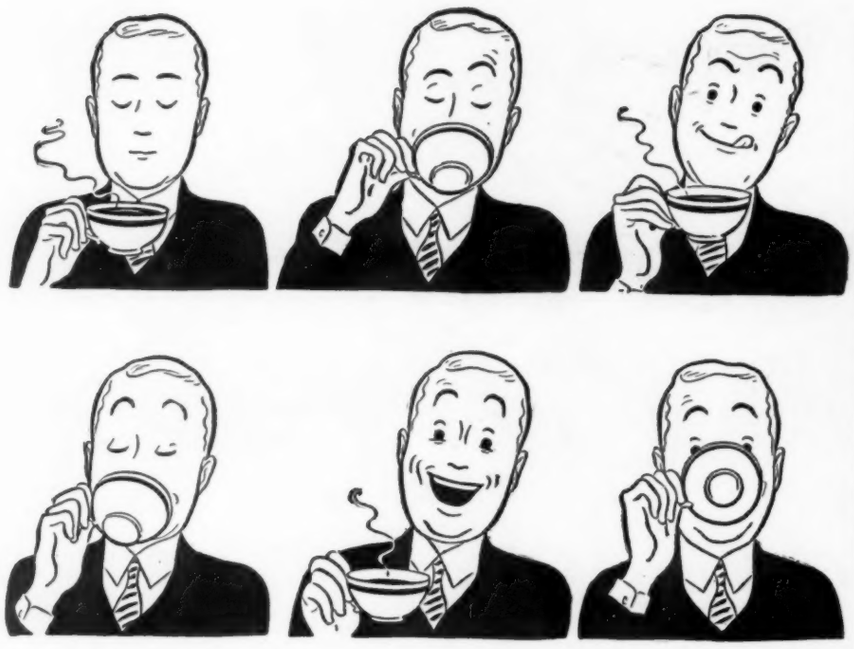
You can help your doctor by being considerate of his time and by using only your fair share of it; by being tolerant and understanding should he be unavoidably delayed in reaching you. You can help him, and yourself, by observing more carefully than ever the simple, familiar rules of health and by guarding especially against accidents.

With your cooperation your doctor will be able to assume his extra medical duties which are so essential to our country's war effort.

Upjohn
KALAMAZOO, MICHIGAN

FINE PHARMACEUTICALS SINCE 1886

IT TAKES MONEY TO WIN—BUY WAR BONDS AND STAMPS



"It's funny how wrong I've been all these years!"

"I'VE ALWAYS THOUGHT of Postum as a substitute for coffee!

"But recently a friend told me that Postum was not a substitute for anything . . . that it was just a perfectly swell drink in its own right!

No other drink like it!

"So, of course, I tried Postum today. What a pleasant surprise! This Postum is really delicious . . . a hearty, full-bodied drink that is just what I've been looking for since I first heard talk about coffee-and-tea shortages!"

Postum is not a substitute for *anything*. It tastes no more like coffee than coffee tastes like tea.

Postum has a distinctive flavor all its own . . . a flavor that's rich, full-bodied, and mighty satisfying. And it's this downright *goodness* that has won Postum its place as a favorite mealtime drink in the homes of millions of Americans.

What's more, Postum is a wonderful drink for the whole family, children as well as grown-ups. For it contains no caffein, no stimulant of any kind.

Have you tried Postum recently? If not . . . get curious! Discover why more and more Americans are turning to Postum. Buy Postum . . . today. It costs you less than a ½¢ a cup.

Get Postum Cereal, the kind you boil, "perk," or drip or Instant Postum, made instantly in the cup or pot by simply adding hot water. A product of General Foods.

P. S. *Listen to the Aldrich Family, Thursday Nights—NBC Network.*

Postum

ONE OF AMERICA'S GREAT MEALTIME DRINKS

favor the vegetables rich in vitamins rather than in calories.

During the last war the Russians and Germans ate large quantities of watery root vegetables such as the turnip. They also tried to eke out their dwindling supplies of flour by adding bran and chaff, and even straw. By doing this, they only made matters worse, for the value of a food depends mainly on the ratio of nutritive to non-nutritive components. The most nourishing foods are those high in digestible material and low in waste products such as water and indigestible cellulose. There is danger even in a diet consisting mostly of bran and vegetable products, because the coarseness and amount of fiber of such foods may interfere with the absorption of the few digestible ingredients present.

A hundred years ago wheat contributed nearly half of all the calories of the Englishman's diet. Though we eat only half as much wheat today it still provides more calories for the English speaking world than any other food. The same is true of rice in the Orient. These two grains can be raised easily and cheaply and are very nourishing.

The stone mills of the past left the flour coarse and not very white, but in it remained most of its vitamins and minerals. The same was true of rice. Primitive milling left a coating of bran containing certain vitamins and salts. Both these grains have suffered through modern milling processes. Fine, white flour and polished rice may satisfy the eye but not the Washington yardstick. The Council on Foods and Nutrition of the American Medical Association recommended in 1939 that these vitamins and minerals be restored to our flour, and it is now possible by buying white flour which bears the label "enriched" to secure flour equal in quality to that milled a century ago. A brown rice and an unpolished rice can now be bought in American markets also, and the latter, after cooking, is almost as white as polished rice and much more nutritious.

These grains do not, however, hold the important place in our diet that they did a century ago. For, during the present century, a new science has been born—the analysis of foods, what they do for us and why. An excellent example of what

scientists have learned and are able to contribute to the war effort is found in their study of aviation medicine. Some of the boys learning to fly are handicapped by night blindness or inability to see anything in the dark. The scientists say that night blindness is one of the symptoms of carotene or vitamin A deficiency. To prove it they give these boys concentrated amounts of carrots and carrot juice for two or three weeks, and as a result their night vision shows marked improvement when vitamin A deficiency was the cause.

Thus, in the light of present knowledge, we must all have not only the right number of calories, but the right amount of protein, calcium, iron, carotene, thiamine, riboflavin, nicotinic and ascorbic acids and vitamin D. If we had to hunt them out for ourselves we would be in a sad state, but fortunately it has all been figured out for us, and we can still eat and be merry—with reservations!

This brings to mind another food—the black sheep of our modern diet—sugar. According to the specialists its rationing will not prove to be a hardship, because it has nothing to offer but calories. On the Washington yardstick, calories alone are not enough. Food as well as people must have something constructive to offer; it must make us strong and hard and tough, not weak and soft and flabby.

Lest we think we are abused, let me quote from a letter I received the other day from some one in the south Pacific: "Life in this area, almost anywhere, is not for sissies or the unstable person. Isolation, monotony, heat, humidity, insect pests and the lack of all the little comforts of life get them down. Newspapers, magazines, radio, movies, cokes, mail, etc. are all scarce or nonexistent. This is not such a good place to have a war, and in fact I wonder why some of these places were ever discovered!"

If one of the things we who stay safely at home have to do—or rather have the privilege of doing in order to help win this war—is to eat less, or perhaps just to eat fewer of those pet dishes of ours and more of the things that are good for us, it is little enough. Let it not be said of those on the home front that our *will* is strong but our *won't* is weak!

"The Great Commoner"

Food shortages are becoming more severe every day—and with an army to feed and a world to *help* feed, these shortages are likely to increase, rather than decrease, throughout, and after, this war.

But there is one product we here in America are blessed with unstintingly—Enriched White Bread—bread to which has been added essential food minerals and vitamins* necessary to health and growth and rugged energy—a food that all can comfortably afford!

The white bread you find at your store is now enriched. For our government experts in nutrition realize the importance of this food to Americans' welfare and health.

In line with this thinking, it might be well to recommend the daily, plentiful use of this thrifty source of energy—to all who look to you for counsel on health matters in these driving, energy-consuming days.

* Thiamine, niacin, and iron.

Department of Nutrition

American Institute of Baking

10 ROCKEFELLER PLAZA, NEW YORK, N. Y.

ACCEPTED AMERICAN MEDICAL ASSN. Council on Foods

Please send me your literature on "Enriched White Bread."

Name .....

Street .....

City ..... *State* .....

H 18

Rx

IF YOU HAVE ONE LEG THAT IS SHORTER THAN THE OTHER

"ELEVATORS"

Shoes

Even if one leg is *as much as an inch and a half longer* than the other, a pair of "ELEVATORS" Shoes with the inner ramp *in one shoe only*, will conceal the unevenness in your gait . . . "confidentially." These special "ELEVATORS" Shoes are matched, look like any other fine quality shoes, and are made to order to your specifications. Even if the difference is in the size of your FEET, you can get a pair of "ELEVATORS" to fit *each* foot. This service is available only on styles 901, Black and 902, Brown (Illustrated).

$20.00

STONE TARLOW CO., Inc., Dept. H643, Brockton, Mass.

Send me your FREE BOOKLET and name of nearest "ELEVATORS" Dealer.

NAME.....

ADDRESS.....

CITY.....

EXCLUSIVE MANUFACTURERS OF "ELEVATORS"

Questions and Answers

WHAT PEOPLE ARE THINKING ABOUT HEALTH

WHAT a nation at war is thinking about health problems should be an interesting commentary on its reaction to a war situation in which health and its relation to manpower and the war effort takes on increasing importance. Studies made by the Bureau of Health Education of the American Medical Association over a period of ten years have indicated certain definite trends in the health interests of the American people. Problems relating to diet, sex, skin and cosmetics have always been near the top of the list.

In the accompanying tables are shown the predominant interests of the American people who have purchased, or received gratis on request, pamphlet publications by the Bureau of Health Education. In this list, material on sex education is first, as usual, but interestingly enough, skin and cosmetics are not even in the first ten. The high place in the list occupied by material having to do with health examinations of apparently healthy persons, with prevention of communicable diseases and with the structure and function of the human body are encouraging evidences that the American people are responding to the national emergency with an increased and more constructive consciousness of genuine health problems, as distinguished from the somewhat more superficial questions relating to personal appearance.

The order of preferences among pamphlets is significant because of the large total distribution—217,162 individual pamphlets. Another index is the classification of questions received by the Bureau of Health Education from lay inquirers through the mail and through question boxes at fairs and exhibitions. The order of frequency of topics touched on by these inquirers is shown in the second tabulation, covering 13,392 inquiries received in 1942. From this classification have been eliminated requests for free material and inquiries about books, since these requests pertain to many different topics. In this list an entirely different order of interests appears. It is evident from time to time that correspondence is stimulated by current publicity relating to health problems, threatened epidemics, new medical discoveries and suggestions contained in health columns and newspaper feature articles on medicine. The correspondence also reflects the search for relief from personal suffering or illness in the immediate family.

All these straws in the wind indicate that the average citizen seeking better ways to good health is groping for information and is in a mood to accept any form of guidance which bears the stamp of authenticity. It is proof that health education, youngest of the branches in the broad field of education, is on its way and that through health education progress in medical science and refinements in medical technic will be applied more rapidly than ever before to the relief of pain and the conquest of disease.

W. W. Bauer, M.D.

Distribution of Pamphlets, 1942

Sex; sex education	49,185
Health examinations	31,155
Communicable disease control	22,978
Human anatomy; physiology	20,289
Maternal and child health	15,272
Dental hygiene	15,232
Accidents; first aid	10,137
Health problems in education	9,583
Vision	3,904
Physical education	3,712
Skin; hair; beauty	3,050
Public health; sanitation	2,831

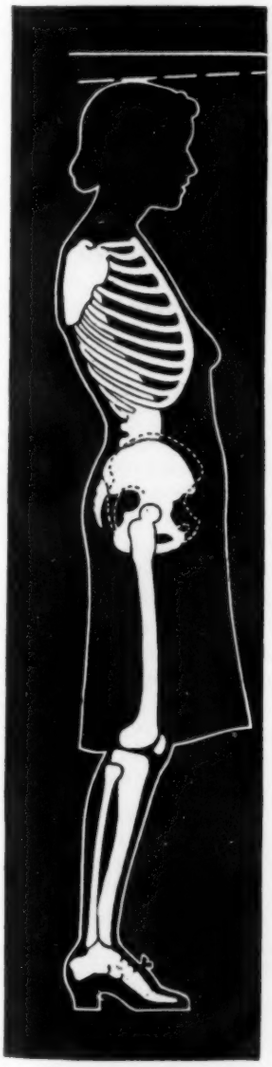
Analysis of Inquiries, 1942

Skin; hair; beauty	1,273
Drugs	884
Food; diet	722
Doctor-patient relationships	581
Consumer education	318
Vision	289
Nose; throat	285
Posture; feet; deformities	263
Cancer	237
Allergy	201
Weight control	191
Dental hygiene	191

It's patriotic to improve your posture!

CAMP

NATIONAL POSTURE WEEK
May 3rd to 8th



Today, more emphasis than ever before is being placed upon *good posture* as an essential factor in our nation's well-being. That is why, this year, National Posture Week becomes more far-reaching and significant than at any time since its inception . . . Why, this year, it should be of more than usual interest to you and others interested in promoting and maintaining public health.

"Fitness for Victory"—slogan of this 5th National Posture Week—will ring like a battle cry from one end of the country to the other. Press, radio, schools, colleges and civic groups will voice the challenge—"How are you standing up to the extra demands of total war . . . are you *fit* to do *your* share for victory?"

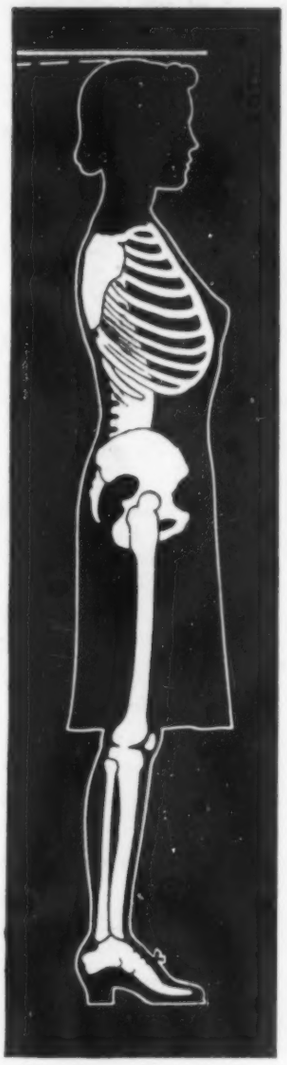
Join in this great event! Now—of all times—help to make America *posture-conscious!* Help yourself overcome ordinary postural faults. If you suspect that something serious is wrong, *consult your physician.*

★ ★ ★

A wealth of authentic posture information has been made available to educators and physicians by the Samuel Higby Camp Institute for Better Posture, sponsored by S. H. Camp and Company. If you have not already received this ethical and educational material, including booklets and posters, write to the

Samuel Higby Camp Institute for Better Posture.
Address: Empire State Building, New York City

S. H. CAMP AND COMPANY, JACKSON, MICHIGAN
World's largest manufacturer of scientific supports
Offices in New York; Chicago; Windsor, Ontario; London, England



Bad Posture
can drain your energy, seriously impair efficiency . . . may even bring on serious health threats. Poor posture is a liability to a nation at war!

"FITNESS FOR VICTORY"

Good Posture
helps lessen fatigue, conserve energy, increase your efficiency and productiveness. Today, it is downright patriotic to improve your posture!

FLAVOR
of tree-ripened fruit
Dr. Phillips
PURE FRUIT JUICES
Grapefruit; Orange; Blended Orange and Grapefruit provide Vitamins A and B with an abundance of
VITAMIN C
plus DEXTROSE
Food-Energy Sugar
DR. P. PHILLIPS CANNING CO., ORLANDO, FLA.

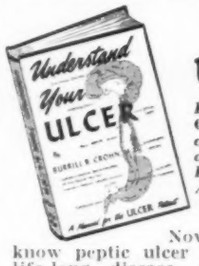
KEMP'S SUN-RAYED PURE TOMATO JUICE
PURE
NON-SEPARATING
UNDILUTED
DELICIOUS
THE SUN-RAYED CO., FRANKFORT, IND.

America's Favorites

Mention HYGEIA when writing to Advertisers

Doctors can Recommend This Book to Patients!

UNDERSTAND Your ULCER



By DR. BURRILL B. CROHN, M.D., Associate in Gastro-Enterology, Mount Sinai Hospital, New York; Associate in Medicine, Columbia University.

Now that physicians know peptic ulcer is likely to be a life-long disease, especially if the patient is subject to overwork, worry, or anxiety—this book will help doctors and benefit patients. For this book simply and clearly tells the patient how to live, take care of himself, and regulate his diet—containing only those facts on which gastroenterologists are in general agreement.

Dr. Walter C. Alvarez, editor of GASTRO-ENTEROLOGY says, "Many a physician must wish he knew of some book the patient could buy. Dr. Crohn has now written such a book and has done a good job. The book should be very useful and can be recommended heartily."

Sent on 5 Days' FREE EXAMINATION

Sheridan House, Publishers, Dept. H
257 Fourth Avenue, New York, N. Y.
Please send me UNDERSTAND YOUR ULCER at $2.50 per copy postpaid. I enclose $..... in payment or send C.O.D., in which case I will pay few cents mailing costs. It is understood that if I am in any way dissatisfied I may return book for a complete refund within five days.

Name.....

Address.....

Factors in Nutrition

(Continued from page 349)

through ordinary window glass—gives vitamin D to the body. Sunlight contains ultraviolet rays, which change ergosterol and cholesterol and related substances found in natural fat to active forms of vitamin D. Ergosterol is contained in the layer of fat under the skin and is activated by the ultraviolet rays of sunlight. The rays, however, cannot pass through ordinary window glass. By activating ergosterol and similar substances, the sunlight helps the body to use calcium and phosphorus, for which vitamin D is essential. In addition to forming vitamin D, sunlight helps the body by stimulating the formation of hemoglobin, the oxygen-carrying substance in the blood. Sunshine and fresh air affect our spirits and our appetites and help nutrition in many ways that we can feel in the form of increased well-being but cannot yet explain by chemical research.

The digestive tract establishes habits of its own when eating habits are regularly followed. If meals are eaten at the same time every day, the digestive juices in the stomach collect habitually at this time. Since they are needed for preliminary digestion, especially of protein, digestion usually improves when meals are regular. Meals should never be too close together. We grow hungry when the stomach empties, usually in about four hours after mealtimes. If there is much protein food such as meat, together with fat, in the meal, emptying time is delayed and it takes longer to grow hungry. If, on the other hand, the meal is mainly carbohydrate, such as bread and fruit, with only a little fat, we grow hungry more quickly. Even with light carbohydrate foods and little fat we ought to allow about three hours, under ordinary circumstances, before eating again, and four hours or longer if meals are heavy with fried or fat meats. If meals must be taken either at short intervals or at especially long ones because of school or working hours, the food should be adjusted according to the length of time necessary for its digestion.

Stomach and intestines react quickly to the condition of the nerves and to the emotions. Pleasantness at mealtimes helps digestion. Worry, fatigue, strain and emotional upsets, especially during or just before meals, affect digestion adversely.

People inherit certain customs of eating which affect nutrition through determining types of foods habitually eaten. Nationalities, religions, communities and families influence choice of foods in various ways, some good and some bad for health. Intelligence and education are essential for avoidance of bad nutritional habits, especially those which are inherited and have been considered good for generations.

The attitude toward food is of greatest importance during infancy and childhood. Habits of eating, as well as other habits, are established with great permanence and ease at the period of babyhood and earliest childhood. In order to develop a good attitude in babies and children toward the kinds and classes of foods that must be eaten for health, the attitude shown toward these foods by the whole family must be good. Children and even little babies react quickly to the likes and dislikes shown by older people and older children. Facial expression as well as speech that is understood will influence the attitude even of adults toward a food they are eating for the first time. Babies and tiny children, particularly, try to imitate parents and older children. If we want children and babies to like and to learn to eat the food they need for bodily development and health, we must eat these foods ourselves and at least appear to like them!

NUTRITION IN PREGNANCY

By Dolores F. Moore

How the body's need for foods changes in pregnancy, and how to meet the new nutritional demands. Coming in HYGEIA

THE OLDER WORKER

(Continued from page 339)

the reversal of the youth curve sets in, the gradual impairment of the physical being and, considerably later, even of memory and of mental efficiency. A civilization, a social or an economic system that discards men and women of 50 or 60 as no longer a link in the chain of human labor, as no longer productive physically and mentally, is thoroughly unbiologic, thoroughly wasteful and thoroughly cruel and inhuman to our fellow men at the later decades of life. A man or a woman in modern industry, trained to do and for twenty or thirty years having done only one small thing such as fitting a screw on a certain size nut for eight hours a day, may not be able to perform that mechanical feat at a sufficient rate when past 50 or 60. But it is a terrible reflection on our education if that man and woman past 50 or 60 cannot do something else of value to society and to themselves. Certainly intelligent planning on the part of society would afford opportunities for such work. In fact, tasks for which men and women past 50, 60 and 70 are thoroughly capable lie all around us like mountains, but we do not see them. Social security for our aging population is all right in principle, but it should take the form of labor for which these people are capable and not pay for doing nothing.

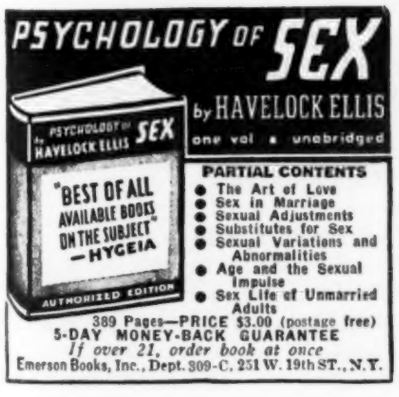
In industrial tasks calling for maximum performance of the entire machinery of the human body, the older worker by and large will be increasingly handicapped by the results of accidents and disease, despite all efforts of accident prevention and the growing knowledge and skill in medicine. Apart from and in addition to these factors, what are the inevitable and unavoidable aging changes of man rendering him less fit, if not unfit, to labor? When and how speedily do these aging changes come on in the individual? Do these aging changes or impairments constitute a bar from all useful labor? Can industry be organized to make fair and adequate use of men and women handicapped by age alone? Is there no alternative to the relegation of men and women past 50, 60 or 70 years of age to the scrap heap of idleness and the dole, to parasitism and charity?

All age changes come on gradually. Those body changes with age involving the strength and endurance of the skeletal neuromuscular mechanism and the senses of hearing and vision are probably the most significant for the industrial worker, but it must also be kept in mind that these systems are all dependent on a good diet, good digestion, good blood, good kidneys and good lungs. The human body is a machine. Any weak link tends to impair all the other links. Some age impairments appear as early as the third decade. If all industrial labor were physically as exacting as prize fighting, marathon running or professional football, nearly all workers would be retired at 35 years of age.

Progressive age changes not as yet shown to be due to specific diseases are: gradual tissue desiccation; gradual retardation of cell division, capacity of cell growth and tissue repair; gradual retardation in the rate of tissue oxidation; cellular atrophy, degeneration, increased cell pigmentation and fatty infiltration; gradual decrease in tissue elasticity and degenerative changes in the elastic connective tissue; decreased speed, strength and endurance of skeletal neuromuscular reactions; decreased strength of skeletal muscle; and progressive degeneration and atrophy of the nervous system, impaired vision, hearing, attention, memory and mental endurance.

The Neuroskeletal System. The gradual slowing and weakening of reflexes and general body activity in the aging mammal is so obvious as to be well known to both physicians and laymen. Decreased functional capacity in both the nervous tissues and the skeletal muscular tissue seems to be at the base of this gradual decline. Actual atrophy of the cells of the cerebellum has been described in the aged and, since this part of the nervous system is seriously concerned with skeletal muscle tone and coordination of skeletal muscle contraction, it may be a factor in the growing muscular weakness of old people, irrespective of the cause or causes of this atrophy.

In view of evidence of atrophic and degenerative changes in the nervous system, irrespective of the primary cause or causes of these changes, it is not surprising that neuromuscular weakness, slowing of the reaction time and decreased capacity to learn are part and parcel of the physiology of aging. The speed of learning seems indeed to decrease gradually in man from the fourth decade on. But this handicap of the aged is on the



THIS SUMMER

Two Months of Educational Rehabilitation

For boys and girls requiring a specialized educational program.

Devereux Pine Camps, on the shores of Lake Embden, North Anson, Maine, provides outdoor summer camp life. Rustic cabins with modern facilities. Summer session of Devereux Schools.

HELENA T. DEVEREUX, *Executive Director* — JOHN M. BARCLAY, *Registrar*

Devereux

(Incorporated as a school not for profit)

Box G — Devon, Pa.

whole more than made up for in some individuals by their greater speed of correlation and evaluation of the new experience.

There is little evidence of aging changes in smooth muscle, which seems on the whole to retain its normal character into advanced old age. The diminished tone in smooth muscle in old people may be secondary to the impairment in the nervous system, indicated above. But not all the impairment of body motility with age can be ascribed to degenerative changes in the nervous system itself. The strength of the biceps at the sixth decade of life is only about 50 per cent of that at the age of 25 to 30. The trunk muscles decline in power somewhat more slowly. However, recent investigation reports little evidence of decrease in muscle strength and endurance in people who would ordinarily be called old —that is, people 70 to 90 years of age. This is just another illustration of the individual variations in the chronologic age at which the aging processes appear. There is some increase in connective tissue and elastic fibers in the skeletal muscle of old people, and there is clear evidence of desiccation, that is, decrease in intracellular fluid. But in this respect the skeletal muscle of the aged falls in line with all the other tissues of the body.

Vision and Hearing. Because of the accessibility of the organs themselves and the availability of quantitative tests of functions, we have more accurate information regarding the aging changes in the physiology of the eye and the physiology of the ear than is the case with most of the other systems in the human body. In the case of vision, there is a gradual decrease in visual acuity (central vision), a gradual narrowing of the visual field, as well as a slowing of the dark adaptation (peripheral vision), and a gradually higher threshold for light stimulation for man past the fourth decade. The narrowing of the visual field is probably due to the actual degeneration of the nerve cells, starting in the periphery of the retina. We are not yet in a position to say whether these visual impairments occur independent of, or are secondary to, impaired retinal circulation. It is equally well known that the incidence of cataract increases with aging, irrespective of whether or not the tendency to cataract formation is hereditary.

Hearing. From the age of about 20 on, there is a gradual loss of acuity to all tones, but the loss of sensitivity is greater to the high tones. This deterioration of hearing is somewhat greater in the male, but the degree of retrogression is not predictable in chronologic age, as some people at 80 have no greater auditory impairment than other normal people at 50. This impairment of auditory acuity is present even when tested by bone conduction. The cause for this decline in auditory acuity appears to be a gradual but distinct atrophy of the nerve cells in the inner ear. But anemia, due to incipient arterial sclerosis, may also be a factor.

In the light of all these facts, one would expect that intellectual capacity should decline parallel with neuromuscular strength and endurance. According to all existing evidence, this is not the case. This exception is probably due to the significant role of experience, especially in the case of complex intellectual problems.

The diet of the older worker. While we do not know what may be the optimum diet for optimum efficiency for any age, we do know enough to say with certainty that the older worker will keep most fit by eating enough good food to avoid underweight and not eating so much food that he or she becomes obese. Life insurance statistics show clearly that marked underweight, as well as marked obesity, shortens the life span. Common experience demonstrates that both impair physical endurance and performance. It is not difficult to understand why ingestion of food to the point of obesity is injurious to people with reduced factors of safety in the matter of insulin, pancreas, sugar and fat metabolism. Such dietary excesses damage by overwork already impaired mechanisms. But in the absence of diabetes, actual or incipient, why does obesity, maintained for years, initiate or aggravate cardiovascular, renal and other disorders that shorten the life span? While the answer to these questions is being sought by experiments and accurate observation on mice and men, prevention of obesity in all workers past 30 appears to be a must.

Normal aging does not strike man with the suddenness of an acute disease. We are not worth 100 per cent, industrially, today, and worth zero tomorrow on our sixty-fifth or seventieth birthday. We grow old and inefficient, just as we grow up and become efficient, over the years. We have discovered that useful work can be performed by people with disabilities more serious than those of normal aging, such as the blind, the deaf, the mute, people minus a hand, an arm, a leg or both legs. We readily admit that useful work suitable to the gradually aging worker is less readily provided in industry than on the farm. But it can be done, it has been done, it is being done—even in industry. Such an experiment by the Dodge Division of the Chrysler Corporation in Detroit is described in some detail in Forbes' Magazine for November, 1942, by Don Wharton. The 99 workers in the "Old Man's Division" of the Dodge plant average 66 years in age, and some of them are past 80. But the fact that all these workers receive the same pay (93 cents an hour) makes me think that the department is not run on a strict economic basis, that the excess costs, if any, are charged against all the workers in that industry, or added in the price of the product, a practice not uncommon and possibly justified in the better morale of the older worker. The general formula relating work to remuneration seems simple:

A. *The younger worker:* Physical strength and endurance growing but not at adult par; skill and experience growing but not at adult par—less than adult performance and pay.

B. *The adult worker:* Strength and endurance at maximum; experience and skill near or at maximum—maximum performance and pay.

C. *The older worker:* Physical strength and endurance receding, experience and skill at par—generally less than adult performance and therefore less pay.

According to the United States census, the number of people past 65 years of age in our population has increased during the last ninety years from 2.6 per cent to 6.8 per cent. If this trend continues, and I think this is assured by more of science and the better art in

medicine, fifty years hence about fifteen out of every hundred people will be over 65 years old. I think we can add that this army of older people fifty years hence will be even better qualified for useful work than are the people of the same age today. Thanks to more science and better art in today's medicine our larger "aged army" of 1940 is less decrepit than was our smaller army of 65 year olds a hundred years ago. It is sheer waste, bad biology and gross injustice all around to feed, house and clothe this army in idleness. Old age pension is not the answer. The dole is not the answer. The only answer is useful work for pay, plus protection against the costs of sickness and accident. When aging has rendered us incapacitated for useful work, we are truly sick. I think that useful work is a privilege and a blessing, not a curse. It is also a biologic and social duty as long as we can carry on. Because of the probability of less elastic arteries and less cardiac reserve, not to mention less strength in the skeletal muscles, the worker past 60 should, as a rule, not be put at tasks calling for the physical power that a worker aged 20 to 40 may deliver with safety. Moderation in all things and a thorough medical check-up twice a year will aid us in keeping fit to carry on. There is the prevailing view that quitting useful work before the infirmities of old age and specific disease compel it hastens the age decline and brings on death sooner. It is difficult to check this view by adequate controls. So far as I know, it is based on conspicuous instances, forgetting the exceptions. But to the extent that idleness decreases the zest of living, and unhappiness and depressing mental states actually impair some of our body machinery, it may be true, especially if the pleasure from good food is still strong, for in that case injurious overeating is likely to become the rule. I dream of a tomorrow when our millions of men and women well past the chronologic three score will say with Albert J. McCray, age 71, now running a drill press at a Douglas Aircraft plant: "I'd rather have a job than a pension any time!" That spirit helps to keep the older worker young and aids in making America stronger.

NURSES AND THOSE THEY SERVE

(*Continued from page 337*)

woman who yearns for the adventure of military service yet knows she can help most to win the war by staying on the home front and training hundreds of other nurses. There is a lamentable shortage of nursing teachers just now, when the number of students must be raised to an all time high.

Similarly important on the home front is the public health nurse. Although the United States has the best public health nursing services in the world, they have never met the tremendous need. Public health nurses, who must have special preparation for their work, form only about 5 per cent of the nation's total nursing pool. More communities are without public health nursing since the war began, often because personnel is simply not available. Since war heightens the importance of disease control and prevention, the public health nurse who is doing vital war work should stay at it.

The industrial nursing field has expanded enormously since the war began. The United States Public Health Service census for January 1942 showed 3,000 industrial nurses. No one knows exactly how many there are today, but doubtless the number is considerably larger than this.

In many a factory, however, the plant nurse spends much of her time on clerical details or doing accident prevention tasks that should be delegated to the safety engineer. Such practices, says the nursing profession, should cease in view of war shortages. The smaller plant that cannot keep a nurse busy all day in actual health care of employees should arrange to hire the needed number of nursing hours from the local visiting nurse service. Hospitals and health services in war industry boom areas are often woefully understaffed. Beyond a certain point, professional nursing skills can serve war workers better in those hospitals and health agencies than they can within the walls of the factory itself. Nurses indispensable to maintaining hospitals, schools of nursing, and public health services, and those engaged in graduate work preparing for these essential positions, should fight the war on the home front. Recruits for military service should be drawn from those whose going will disrupt needed home services as little as possible.

So much for stretching existing nursing services. Public opinion can render a further war service—and perhaps the most important of all in connection with nursing—by encouraging any qualified young woman to begin her nursing education this coming summer or in the autumn, thus expanding the total supply. It may be a hard decision for her to make without encouragement and perhaps financial aid. The girl with a high school education or better, whom nursing needs, can secure well paid work in war industry. Or she may join any one of Uncle Sam's uniformed auxiliary services for women, which offer a salary even during training and have all the glamor of newness.

HELP WANTED!

Nursing needs you, if you are a young woman between 18 and 35 with at least a high school education. For information about schools or scholarships, write: Student Nurses, 1790 Broadway, New York City.

Obviously, more government aid to nursing education is in order, since so much competition has been set up for the very girls whom nursing must have in order to do its war job. A plan for a student nurse corps, involving government stipends during training, is under consideration. Whether or not it is adopted, we must have students of nursing, and you have a responsibility to tell young women you know why they should join the profession. Physicians and nurses can be especially effective recruiters.

One of the most potent arguments is that nursing is war work with a future. While peace will probably bring demobilization of the auxiliary services, and the industrial worker must look for a new job, nurses will continue to be in demand. Those prewar trends in hospital growth will continue, American nurses must help reconstruct war-devastated areas, and we shall have greatly enlarged veterans' hospitals to staff no matter how soon the war ends. If the worst comes, we may need to care for the million wounded soldiers that a lugubrious statesman predicted recently.

While the war lasts, nurses are indubitably the front line fighters among women, and students give war service soon after they begin studying by helping release graduates for military duty.

Then, too, nursing is a humanly satisfying profession; it is a splendid preparation for homemaking. More scholarships are available now than ever before, and it is easier for the girl with special credits to arrange for a shortened course. Women are wanted for the top jobs in nursing, and good salaries await nurses with executive abilities.

The nursing shortage cloud is not without its silver lining. Food restrictions forced British officials to focus on the people's diet to the extent that, even as war rages, the children of the poor are more adequately fed than ever before. Last November fire swept a Boston night club where eight hundred merrymakers were celebrating a football victory. The nation's horror over the hundreds of dead and burned sent city officials everywhere scurrying to enforce fire laws and pass new and better ones. Until they could not be had, the public probably gave little thought to nurses and their problems. Yet nursing is a public service that the public as well as nurses should wish to maintain at a high level of efficiency. The war is forcing nurses and the people they serve to cooperate more closely in order to care for our fighting men, maintain health on the home front and be prepared for disaster, epidemic or possible enemy attack. Perhaps new mutual understanding gained during the war effort will help us, when peace comes, to use nursing to raise the level of positive health and human well-being to a new high.

TIRED EYES

(Continued from page 341)

some cases, especially those in which real muscular defects are found on examination, eyes are benefited by appropriate procedures directed toward improving the nerve and muscular control of the inside and outside muscles of the eye. It is not an uncommon experience to find certain patients so much relieved after exercises have been intelligently carried out for some time that they no longer require glasses for constant use, and in some cases they no longer feel the need for glasses. However, it is also a common experience to examine patients who have been given lenses, and have apparently been relieved of symptoms by their use, who even without exercise find glasses are no longer necessary. Therefore, all factors must be considered in evaluating supposed cures by any treatment. Undoubtedly, the physical condition of the patient is an important factor affecting the need for glasses. Furthermore, the shape of the eye changes with growth, and the necessity for glasses may alter merely because of the natural development of the eye.

If a patient is shown to have extreme weakness in bringing his eyes together (convergence insufficiency) and the patient's ability to use his eyes progressively improves as the ability to bring the eyes together improves and reserve strength in doing this is established, there seems to be little doubt of the improvements wrought by exercises.

The causes of eye fatigue are numerous. Among the material causes are poisons from outside the body, such as alcohol, tobacco, or arsenic; improper diet, poor physical condition, lack of oxygen in the tissues from anemia, sinus disease, improper or inadequate glasses and poor illumination. Alcohol and tobacco used to excess are detrimental and may even cause inability of the eyes to distinguish colors. Malnutrition affects the eyes because the vitamins and minerals, sugar and other substances necessary to keep the body operating properly are not present in the diet.

Studies of the effect of altitude and lack of oxygen on accommodation have shown that at 15,000 feet there is a rapid onset of fatigue and at 20,000 feet fatigue is even more marked. The close connection between the sinuses of the nose and the eyes makes the eyes especially sensitive to inflammation of the sinuses. The resistance of the eyes is lowered by sinus infection, and frequently they become inflamed and the nerves to the inside and outside muscles of the eyes may become weakened.

If the eyes are not properly corrected by glasses for errors of nearsightedness, farsightedness and astigmatism, they must strain to accomplish their tasks. Therefore, proper glasses frequently relieve eye fatigue, headaches, tears and other annoying symptoms.

In spite of the claims of charlatans that nearsightedness (myopia) can be cured without glasses, no means has yet been found by ophthalmologists or any other group of persons dealing with eye conditions to cure myopia. Nearsighted patients often complain of eye fatigue, and some patients who have been benefited have improperly worn nearsighted glasses for farsighted conditions. Nearsighted glasses may be erroneously prescribed unless the inside eye muscles were temporarily weakened with the use of drops when the eye muscles were in spasm, or when some general cause, as, for example, absorption of poisons from the sinuses, exists. Naturally, these patients see better sometimes when the lenses are discarded, and then the eyes may be more comfortable. In some patients, nearsightedness is lessened by the development of the eye; they are uncomfortable until their lenses are weakened. Although these patients may see adequately without the use of glasses, they are not cured of true myopia. The correction of differences in the size of the images seen by each eye (aniseikonia) has also been a factor in relieving symptoms of eyestrain in certain patients.

Reading by inadequate illumination readily fatigues the eyes. Lighting, to be comfortable and conducive to eye hygiene, should provide adequate illumination; be well diffused, distributed and directed; and eliminate too great contrasts in the surrounding field, especially glare and shadows. The levels of illumination shown in the accompanying table have been recommended. If the amount of illumination is insufficient for a room, if it is poorly distributed and if there is direct glare on a book or on work or the reader sits facing a window on a sunny day, symptoms of eye fatigue may develop.

Inadequate light lowers human efficiency and is a major cause of industrial accidents. Inadequate light may often be a cause of unpleasant eye symptoms through continued eyestrain. High levels of illumination properly distributed and accompanied by absence of glare are far less fatiguing than low levels. It is important to note that even if the amount of light on a working area is sufficient, unless the surrounding areas, such as the rest of the room, are adequately lighted, the high local illumination is conducive to eye fatigue and may foster accidents. The adequacy of illumination should be judged by: vision, visual efficiency, visual speed, visual comfort and eye health.

Although eye fatigue usually has an organic basis, psychologic symptoms must not be neglected. Personal problems are important, for

OCCUPATION	FOOT CANDLES
Reading	10 - 20
Sewing (depending on color, contrast, fineness of work, etc.)	10 - 200
Drafting	20 - 50
Locker rooms and toilets	5 - 10
Auditoriums	5 - 10
Stairs and corridors	5 - 10
Classrooms	15 - 20
Blackboards and charts (local illumination)	30 - 50

GUILD OPTICIANS

Guild Opticians

CALIFORNIA
Los Angeles
HEIMANN & MONROE (2 Stores)
Modesto
FRANKLIN OPTICAL CO.
Oakland
FRANKLIN OPTICAL COMPANY (2 Stores)
Pasadena
ARTHUR HEIMANN
Richmond
FRANKLIN OPTICAL CO.
San Francisco
TRAINER-PARSONS OPT. CO.
JOHN F. WOOSTER CO.
Vallejo
FRANKLIN OPTICAL CO.

COLORADO
Denver
SYMONDS-ATKINSON OPTICAL CO.

CONNECTICUT
Bridgeport
WAKEMAN & ANDERSON
THE HARVEY & LEWIS CO.
FRITZ & HAWLEY
New Britain
THE HARVEY & LEWIS CO.
New Haven
THE HARVEY & LEWIS CO.
FRITZ & HAWLEY
CONRAD KASACK
Hartford
LOWRY & JOYCE
THE HARVEY & LEWIS CO.
Waterbury
WILHELM, INC.

DELAWARE
Wilmington
THE BAYNARD OPTICAL CO.
CHAS. M. BANKS OPTICAL CO.

DISTRICT OF COLUMBIA
Washington
EDMONDS, OPTICIAN (2 Stores)
FRANKLIN & CO.
HUFFER-SHINN OPTICAL CO.
RHODES, OPTICIAN
TEUNIS BROTHERS

FLORIDA
Miami
HAGELGANS OPTICAL CO.

GEORGIA
Atlanta
WALTER BALLARD OPT. CO. (3 Stores)
DOCKSTADER-KILBURN
KALISH & AINSWORTH, INC.
Augusta
TWIGGS PRESCRIPTION OPTICIANS
Macon
W. B. KEILY, OPTICIAN

ILLINOIS
Chicago
ALMER COE & CO.
J. H. STANTON
Evanston
ALMER COE & CO.

KENTUCKY
Louisville
THE BALL OPTICAL CO.
SOUTHERN OPTICAL CO. (2 Stores)
MUTH OPTICAL CO.

MARYLAND
Baltimore
BOWEN & KING, INC.
D. HARRY CHAMBERS, INC.
ALFRED A. EUKER

MASSACHUSETTS
Boston
CHILDS, CARL O.
DAVIDSON & VIRGIN
EDWARD W. HELDT
MONTGOMERY FROST CO. (4 Stores)
ANDREW J. LLOYD CO. (3 Stores)
HENRY O. PARSONS
PINKHAM & SMITH CO. (2 Stores)
POLLARD, RALPH L.
Cambridge
ANDREW J. LLOYD COMPANY
Greenfield
SCHAFF OPTICIAN
Springfield
CLARKE, ALBERT L.
THE HARVEY & LEWIS CO.
Waltham
BENNET B. O'NEIL, OPTICIAN
Woburn
ARTHUR K. SMITH
Worcester
JOHN C. FREEMAN & CO.
THE HARVEY & LEWIS CO.

MINNESOTA
Minneapolis
M. J. CARTER
Rochester
A. A. SCHROEDER
St. Paul
ARTHUR F. WILLIAMS

MISSOURI
St. Louis
ALOE'S OPTICAL CO.
GEO. D. FISHER OPTICAL CO. (2 Stores)
ERKER BROS. OPTICAL CO.
JOHN A. GUHL, INC.

NEW JERSEY
Asbury Park
ANSPACH BROS.
Atlantic City
ALTANTIC OPTICAL CO.
FOERSTER OPTICAL CO.
FREUND BROTHERS
Camden
E. F. BIRBECK CO.
HARRY N. LAYER
J. E. LIMEBURNER CO.
PELOUZE & CAMPBELL
East Orange
ANSPACH BROS.
H. C. DEUCHLER
Elizabeth
BRUNNER'S
Englewood
HOFFRITZ, FRED G.
Hackensack
HOFFRITZ & PETZOLD
Jersey City
WILLIAM H. CLARK
Montclair
STANLEY M. CROWELL CO.
MARSHALL, RALPH E.
Morristown
JOHN L. BROWN
Newark
ANSPACH BROS.
KEEGAN, J. J.
REISS, J. C.
CHARLES STEIGLER
EDWARD ANSPACH
Paterson
COLLINS, J. E.
Plainfield
GALL & LEMBKE
LOUIS E. SAFT
Ridgewood
RAY GRIGNON, OPTICIAN
Summit
ANSPACH BROS.
H. C. DEUCHLER
Union City
ARTHUR VILLAVECCHIA
Westfield
BRUNNER'S

NEW YORK
Albany
PERRIN & DI NAPOLI
Babylon
PICKUP & BROWN, INC.
Baldwin
FRANCIS D. GILLIES
Bronxville
SCHOENIG & CO., INC.

Guild Members function as co-operative agents in complementing the efforts of the ethical Eye Physician

Guildcraft

SO MAGNIFICENT was the pride of achievement installed in the minds of medieval guild craftsmen that the individual literally staked his reputation on each task he performed.

The unerring skill and painstaking care immortalized by the guilds of yesterday, fused with the wonders of modern science, set the present high standard for GUILD OPTICIANS' craftsmanship.

For eye comfort, the interpreting of your prescription . . . the grinding of lenses . . . and the fitting of glasses . . . call for GUILDCRAFT, the master craftsman's touch.

Seek this fine quality and craftsmanship in the next pair of glasses you purchase . . . it will cost you no more . . . for GUILDCRAFT SPECTACLES are least expensive in the long run.

are recommended by Physicians

GUILD Rx OPTICIANS

Buffalo
BUFFALO OPTICAL CO. (2 Stores)
GIBSON & DOTY
FORREST-GOULD OPTICAL CO.
FRANK & LESSWING OPT. CO.
PRECHTEL OPTICAL CO.
SCHLAGER & SCHLAGER
FOX & STANILAND, INC. (2 Stores)
URSIN-SMITH GUILD OPTICIANS
VANDERCHER
Kenmore
BUFFALO OPTICAL CO.
GIBSON & DOTY
New Rochelle
BATTERSON, INC., JOHN P.
New York City
LUGENE, INC. (2 Stores)
EDWARD J. BOYES
E. B. MEYROWITZ, INC. (6 Stores)
FRYXELL & HILL
HARTINGER, EDWARD T.
A. HAUSTETTER, INC.
HOAGLAND, J. S.
CLAIRMONT & NICHOLS CO.
GALL & LEMBKE
AITCHISON & CO.
MARTER & PARSONS
H. L. PURDY, INC.
SCHOENIG & CO., INC.
Brooklyn
BADGLEY, H. C.
DOUDIET, ERNEST A.
J. B. HOECKER, INC.
E. B. MEYROWITZ, INC.
J. H. PENNY, INC.
A. M. SHUTT
V. R. TEDESCO
Hempstead
C. WALTER SEE
Staten Island
VERKUIL BROTHERS
Jamaica, L. I.
HANSEN, JOHN
Rochester
WILLIAM J. HICKEY
WHELPLEY & PAUL
WALDERT OPTICAL CO.
Rye
A. E. REYNOLDS
Schenectady
DAY, JAMES E.
OWEN OPTICAL COMPANY
Syracuse
CARPENTER & HUGHES
CLOVER-WHITE OPT. CO.
EDWARD HOMMEL & SONS
Troy
WILLIAMS—OPTICIAN
Watertown
ROBERT L. MEADE
White Plains
JOSEPH E. KELLY
CLAIRMONT & NICHOLS CO.
SAMUEL PEYSER
Yonkers
PROFESSIONAL OPTICAL SHOP

OHIO
Cincinnati
ETTER BROTHERS
KOHLER & CO.
SOUTHERN OPTICAL CO.
Cleveland
E. B. BROWN OPTICAL CO.
RICHARD H. EBNER
HABERACKER OPTICAL CO.
REED & McAULIFFE, INC.
HENRY J. PORTER
Lakewood
HABERACKER OPTICAL CO.
Toledo
PRESTON SADLER

OREGON
Portland
MOOR, HAL H.

PENNSYLVANIA
Allentown
L. F. GOODIN
Ardmore
WALL & OCHS
WINFIELD DONAT CO.
Bethlehem
PRICE, WILLIAM H.
Bryn Mawr
J. E. LIMEBURNER CO.
Erie
HESS BROS.
WILLIAM J. MAGAY CO.
E. K. MEYERS
ERIE OPTICAL CO.
Jenkintown
WINFIELD DONAT CO.
J. E. LIMEBURNER CO.
Norristown
J. E. LIMEBURNER CO.
Philadelphia
JOSEPH C. FERGUSON, JR., INC.
WALL & OCHS (3 Stores)
DOYLE & BOWERS
A. W. BRAEUNINGER, INC.
WILLIAMS, BROWN & EARLE, INC.
JOHN W. CLEARY
SIGISMUND
BONSCHUR & HOLMES, INC.
J. E. LIMEBURNER CO. (2 Stores)
FELDENS & KIENLE
WILLIAM J. SCOTT, INC.
KEENE & CO.
FRANK A. MORRISON
MULLEN & WOLF
MULLER & FENTON
BENDER & OFF
WILLIAM S. REILLY
WELSH & DAVIS
STREET, LINDER & PROPERT
WILLIAM M. WEBER SONS
THE WM. F. REIMOLD CO.
WINFIELD DONAT CO. (2 Stores)
JOSEPH ZENTMAYER
Pittsburgh
GEO. B. REED & CO.
DAVIDSON & CO.
DUNN-SCOTT CO.
GEO. W. HAAS, INC.
B. K. ELLIOTT CO.
F. J. MALONEY
CHARLES F. O'HANLON
SHALER & CRAWFORD, INC.
Upper Darby
J. E. LIMEBURNER CO.
West Chester
WINFIELD DONAT CO.
Wilkinsburg
DAVIDSON & CO.

NORTH CAROLINA
Fayetteville
McBRYDE'S—OPTICIANS

VIRGINIA
Lynchburg
A. G. JEFFERSON
Norfolk
E. E. BURHANS OPTICAL CO., INC.

WASHINGTON
Seattle
CHARLES B. OLMSTEAD
WESTERN OPTICAL DISPENSARY
Yakima
THOR WANGBERG

CANADA
Montreal
R. N. TAYLOR & CO., LTD.
Ottawa, Ontario
SUTHERLAND & PARKINS
Toronto
FRED SHORNEY, LTD.
J. C. WILLIAMS
Vancouver, B. C.
HALE OPTICAL CO., LTD.
Winnipeg, Manitoba
RAMSAY, ROBERT S.

Ask any Guild Optician for the names of Eye Physicians in your Vicinity

DEAFENED?
Investigate
VACOLITE
and Enjoy
BETTER HEARING
$98.75 COMPLETE GUARANTEED INSURED $109.50
Efficiency . . Quality . . Low Cost
VACOLITE COMPANY
3001-3 N. Henderson Dallas, Texas
Exclusive Dealerships Available

Mention HYGEIA when writing to Advertisers

New *under-arm*
Cream Deodorant
safely
Stops Perspiration

Guaranteed by Good Housekeeping

1. Does not harm dresses, or men's shirts. Does not irritate skin.
2. No waiting to dry. Can be used right after shaving.
3. Instantly checks perspiration for 1 to 3 days. Removes odor from perspiration, keeps armpits dry.
4. A pure white, greaseless, stainless vanishing cream.
5. Arrid has been awarded the Approval Seal of the American Institute of Laundering, for being harmless to fabrics.

ARRID IS THE LARGEST SELLING DEODORANT

ARRID
39¢ a jar
(Also in 10¢ and 59¢ jars)
Buy a jar of ARRID today at any store which sells toilet goods.

an unhappy marriage, a maladjustment to life's problems and undisciplined emotions have been known to cause eye fatigue. Fatigue has disappeared when the disturbing factors have been eliminated. The psychologic causes include mental strain, sex problems, overwork and the fear caused by constant danger.

During the first World War, aviators who had just returned from the front after losing their entire squadrons had severe eye fatigue which was not benefited by eye exercises. However, the symptoms of eye fatigue disappeared rapidly after a complete rest away from military surroundings.

Although some authors believe that ocular fatigue is merely a psychologic disturbance, mental suggestion will relieve some but not all patients of eye fatigue. Eye exercises have a valuable place not only in treating crossed eyes but also in the treatment of less evident disorders of the eye muscles which cause eyestrain or asthenopia. Improving the physical condition, correcting errors of refraction and improving illumination and eye hygiene all help in eliminating eye fatigue.

Five Billion Days Off

(*Continued from page 347*)

199 were on the sick list. Nor was this an unusual month. For attendance figures in this yard during the last six months of 1942 showed an average of fourteen to sixteen times as much loss resulting from illness as from accidents. Here is a bottleneck of astounding proportions—the cause of many millions of man days lost to war industries each year.

To be more explicit, we can convert the percentages of the chart into man days as follows. That 8 per cent, first—the time lost due to disabling accidents in 1941—stands for 480 million man days of work never performed. To get the number of man days lost the same year as a result of illness, we must multiply eleven times 480 million man days. You figure it—while we look the other way!

Surely, you think, somebody ought to do something to curb this disastrous waste of working time. In the interest of reclaiming some of those 480 million "days off," notable strides are being made by the National Safety Council. This nonprofit hub of a nationwide movement carries the safety torch for some 5,000 industries, transportation and insurance companies, schools, local safety councils, trade associations, chambers of commerce and other civic organizations, and departments of city, state and national governments throughout the United States, Canada and foreign countries.

In response to our present unprecedented demands for the conservation of human life and energies, the scope of the National Safety Council is being extended far beyond its prewar figure. A group of industrial leaders, many of them members of the Council, has organized the War Production Fund to Conserve Manpower, which aims to promote safety not only in every factory in the country, but also in every city and town, farm and home. The funds pooled by this greatly enlarged membership will furnish technical counsel in industry, finance important research, safety literature, motion pictures and educational programs. When you meet statements like this in your favorite magazine: "52,000 will die without fighting," look for the signature of the National Safety Council War Production Fund to Conserve Manpower. It will probably be there.

These are important moves in the undertaking to salvage manpower. Under the impact of such a campaign, that 480 million figure (the time lost to accidents) will undoubtedly be forced down. But what is to be the program for shrinking our many times greater losses resulting from illness?

Health conscious as we Americans believe ourselves to be, vitamin and nutrition conscious as we have doubtless become, we are still subject to a vast nonchalance toward the minor illnesses which so frequently incapacitate us and so often lead to major or emergency conditions. Of the 92 per cent production time lost to illness,

our chart shows 43 per cent—almost half!—contributed by respiratory ailments, and 13 per cent by digestive troubles. It takes no great insight to recognize that the term "respiratory" includes a good many common colds, or to know that "digestive" often means simply overindulgence. Which brings us face to face—for an unpleasant moment, perhaps—with the bad news that a large and imposing slice of our working time losses result from illnesses that could be averted—at the price of a few familiar precautions.

Astonishing evidence of the national negligence of health was uncovered recently by a large insurance company which writes many thousands of automobile policies. Long observation of highway accidents had convinced the underwriters that the trouble was frequently traceable to the physical condition of the driver. Therefore, they made a special offer to a group of 6,000 automobile insurance buyers—a certificate entitling the purchaser to a free medical examination, with choice of doctors and the understanding that results would be made known only to the policyholder. This checkup was to include the following vital human machinery—comparable to the routine checkup without which no railroad locomotive would pull out of a station—the eyes, ears, chest, heart, blood pressure, urinalysis, nerve reflexes. Entirely free, yet of the 6,000 drivers entitled to this offer, just 59 took advantage of it!

Out of this overwhelming revelation of indifference has been developed a program to combat it. For the Zurich Insurance Companies, whose free medical examination was so coldly turned down, promptly set to work to build the Safety Zone program for business and industry. Today, in hundreds of factories and offices, this program is helping to create a new awareness of the risks to health and happiness invited by careless living habits. Those insidious ailments which take such a heavy toll of our time and energies—infections, poor nutrition, decaying teeth, colds, even bad tempers which precipitate health problems—all strut their hour on the talking picture screen around which the Safety Zone program is built. And a highly engrossing hour it is—or sixteen minutes, to be exact. Whatever the film of the month—"Captain of the Men of Death" (tuberculosis theme), "Hold That Line" (a dental lecture), "Alive or Living" (on diabetes)—each is skilful enough to hold the attention of playgoing office workers and powerful enough to click with the men from the scaffolds and furnaces. Backed up with advance posters and pocket size folders briefing the picture, tied in with appropriate talks and announcements of plans, and shown, often, on a new type of screen which is clearly visible even in lighted rooms, the monthly film gets a spirited response from the house.

But, granted the workers do take a lively interest in the Safety Zone program, what results does it bring besides handclaps? Surely, the power of intelligent propaganda has now been established beyond doubt. And when this vigorous weapon serves such an urgent need as the salvage of manpower, we may be glad we have acquired the know-how.

But no matter how well planned the health education program laid down by crusading industry and a nation drawn up to attention, no matter who undertakes to teach us the rules, there's never a health-seeking soul of us but knows that we are our own first line of defense. We know most of the fundamental rules by heart: "Early to bed and early to rise makes a man healthy," "We must eat to live, not live to eat," Shakespeare's "Unquiet meals make ill digestions," Ben Franklin's "Be sober and temperate and you will be healthy."

Actually, there are just two steps between the absenteeism that can cripple our war industries and let down our soldier sons and the uninterrupted months of work well done which can bring such untold personal satisfaction. These steps are:

(1) Recognize the need for sensible rules of living.

(2) Make a solemn contract with ourselves to live by those rules.

Self discipline is probably the hardest job in the world, for once licked, it makes all the other jobs look easier. In today's crisis, can we "turn on the heat" in our own lives? If so, we shall immediately release for the war effort billions of man days now squandered on preventable aches and pains.

ARE YOU BALD, TOO?

*Below—The same man wearing a patented MAX FACTOR HAIRPIECE

IT'S AMAZING how easy it is to overcome baldness—effectively and permanently—by simply wearing a patented Max Factor Hairpiece. Instantly, you'll have real hair again that looks and feels as if it were actually growing on your head. So why continue to let unsightly baldness detract from your appearance and make you look years older? Learn how you, too, can order an individually styled Factor Hairpiece by mail with money-back guarantee of complete satisfaction. Send for confidentially mailed illustrated free booklet containing full details. No obligation whatever. Write today!

MAX FACTOR & CO.
1666 N. HIGHLAND, HOLLYWOOD, CALIF.

THE OVERSOLICITOUS MOTHER

By FRANK HOWARD RICHARDSON

MOST OF US have laughed over the old story of the mother whose whole system of discipline simmered down to one rule: "Find out what Johnny is doing and tell him to stop!" Yet many a doctor finds out that in dealing with the parents of his little patients, a similar rule is usually called for: "Find out what a child's mother is doing and tell her to do something else!"

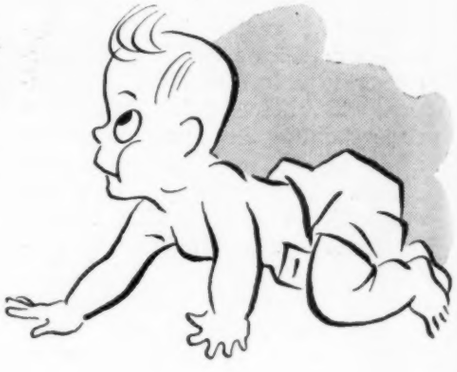
This seems like a humiliating confession to come from the ranks of the pediatricians, who pride themselves on the way they have educated people in preventive medicine. Does it mean that they have done their job inefficiently? On the contrary, the fact is that they have done it so efficiently that a certain proportion of mothers have taken the bit in their teeth and have gone far beyond anything their doctors ever intended in carrying out directions.

To be sure, we shall always have with us the mothers who do not take their children seriously enough, who take no thought as to correct diet, and who neglect the protective inoculations that we urge so sedulously in our desire to keep our little patients well. No amount of preaching, teaching and urging will ever reduce this segment of the population to the vanishing point; they have always existed, and undoubtedly a dangerously large fraction of our parents will always belong to this group. We shall continue to plead with them to do something different.

It is a far smaller, far more intelligent portion of our maternal census who worry us for the reason that they take their duties too seriously. These are the intellectual young mothers, and some who are not so young, who feel that when Providence entrusted them with the direction of the life of a little child, they were called by divine election to a twenty-four hour job whose importance it was impossible to exaggerate and whose execution was a matter of life and death. They are prepared to fulfil their mission, even though the skies fall.

These mothers are a joy to the pediatrician at first, because they want such minute directions and because they can be depended on to carry them out so literally. They admit that they know nothing about their new job, but they are determined to learn. They like written directions and printed diet lists; they devour "baby books" and government bulletins on the care of the infant; they attend lectures and participate in forums; in short, they do exactly what it would seem most desirable for young mothers to do in the way of improving themselves for the important job they have undertaken.

The difficulty begins when they fail to take into account the fact that babies are human beings, and that while rules are excellent, almost no rule is infallible. They forget that since the weather and the temperature and the humidity are changeable, rules for the number and thickness and weight of clothes must be adjustable. They



overlook the fact that since crying, kicking, exercise, meteorologic surroundings and other things that govern the expenditure of energy and the dissipation of body heat are changeable, no hard and fast rules as to the exact amount of formula, food and water can ever be laid down in advance by the doctor, who is of necessity absent most of the time.

When the pediatrician sees his little patient covered with prickly heat because the mother had heard that a certain number of bed covers or a particular weight of woolen shirt was proper for a baby of a certain age, he wishes the mother had been a little less trustful of printed advice. When he finds that she is disturbing the baby's sleep and making herself wretched with fatigue in order to follow some bulletin which outlines a daily regimen based on the assumption that a

mother has no other members of the family to think of and calls for doing something every two hours of the day and every four through the night, he wishes she were not quite so conscientious in her obedience to what she thinks is authoritative. And when he finds that she has omitted some essential from the child's diet because the conditions of the market made it impossible for her to get just what the suggestive diet list called for, he almost regrets the sensible diet directions he gave with the understanding that they were to be for general guidance, not for slavish, literal interpretation.

The daily or twice daily evacuation of the bowels is a matter of real importance that the doctor is accustomed to stress. When, however, his directions are taken too literally, the habit which he expected would become a simple and unobtrusive feature of the day's routine becomes elevated to the status of a sacred ritual whose omission is considered little short of sacrilegious. Baby must remain on his chair until the movement appears; if it is delayed, clouds darken mother's brow and gloomy fears are expressed; when success finally crowns the combined efforts of mother and baby, pride, joy and relief are the order of the day, and baby's prowess is made subject for family rejoicing and felicitation. If nothing happens, a laxative is brought out, seriously discussed and finally and with great reluctance administered; its results are awaited with bated breath for several ensuing hours.

Even worse can be the disastrous effect that an overconscientious mother can produce in her child by attaching undue importance to the amount and kind of food her baby or runabout takes—or refuses to take! The bright youngster soon learns what a potent weapon and what an efficient tool he possesses for wreaking his wrath and accomplishing his desires, when he refuses his food; and how effective a reward for compliance with his wishes is his condescending to eat after he has sufficiently impressed the assembled family with the imminence of starvation!

A notorious example of the lengths to which fond mothers of this sort can go in their insistence on their children's eating certain

What is Luzier's Service?

In effect, it is a means by which thousands of women improve their appearance and maintain its loveliness. Specifically, it is a system of selecting cosmetics to suit individual requirements and preferences. It is based on a Selection Questionnaire whose answers serve as a guide to our Selection Department. It is made available by Cosmetic Consultants who are trained to assist you with the selection of suitable types of Luzier products and to show you how to apply them to achieve the best results, the loveliest appearance. A card addressed to Luzier's, Inc., Kansas City, Missouri, will be forwarded to the Distributor of our products in your vicinity. It will be her pleasure to call on you at your convenience and without obligation on your part to acquaint you with the many delightful features of Luzier's Service.

Luzier's, Inc., Makers of Fine Cosmetics & Perfumes

KANSAS CITY, MO.

FOR THAT LONG MARCH AHEAD—

POLL-PARROTS LET YOUR BOYS' AND GIRLS' FEET DEVELOP NORMALLY

Your boys and girls will enjoy foot-happiness at maturity . . . if you INSIST on Poll-Parrots . . . the shoes with 10-way Built-in Fit. Sturdily constructed of fine leathers over carefully designed lasts, they're just right for growing feet. Built-in stamina means shape retaining wear . . . *and repair bill savings.* Moderately priced at leading stores *EVERYWHERE.*

Buy U. S. War Bonds and Stamps

Poll-Parrot SHOES FOR BOYS FOR GIRLS

STAR BRAND SHOEMAKERS
Division of International Shoe Co. St. Louis, Mo.

supposedly essential foods was furnished by the much debated spinach, before it toppled from its perch in public esteem. The fact that Mother loathed it and that Dad could never by any stretch of the imagination be conceived of as tolerating it made no difference to such mothers; the diet list, or the government bulletin, or the expert on nutrition at the woman's club or the mothers' meeting, said babies must eat spinach; many a family meal was ruined because baby's judgment was more in accord with up to date dietary science than were mother's advisers.

Serious as this sort of meddlesome overconscientiousness can be when it is confined to the physical field, this is nothing compared to the harm it does when it invades the mental and emotional realm. The mother who believes everything she reads and hears about the physical direction of her child is fair game for the sort of practical psychology that is finding such free expression today in books, magazine articles and government health department pamphlets and bulletins on child care.

It is not that these articles and books are not sound and scientific; they are both. The danger lies in the avidity with which mothers of the kind we have been discussing seize on the practical suggestions contained, take them to heart with all their implications, and pounce on the children as victims on whom they are to be tried out. The fact that in doing the things specifically advocated they may be diametrically opposing the main principles underlying the advice does not hamper them in the least.

Take, for example, one of the greatest needs of the child that these articles on child psychology constantly stress—the absolute craving for a sense of security, without which no child can be healthy or happy. Almost equally essential to sound mental health is the knowledge that he is loved by the people who mean most to him, his parents. Important as every psychologist insists that these are, they cannot be brought about by doing any one specific thing; they are rather the sum total of the conditions in which the youngster finds himself. This is unfortunate, for the oversolicitous mothers feel that they must do something concrete about the situation.

They are told that a child must be made to obey instantly, or that he must learn to control his temper, or that he must be taught the necessity for truthfulness, or that he must learn habits of cleanliness. Now these are all matters of necessity, of course, but they come as a matter of growth and development. In the best sort of education, a child comes to realize that he gets along better and enjoys life more if he obeys those in authority, if he doesn't fly off into tantrums, if he tells the truth and if he maintains a reasonable degree of cleanliness. He learns these things gradually, partly by imitation, partly by trial and error, least of all by formal preaching.

It is regrettable but true that the child naturally assumes that the thing his mother talks most about is the thing she feels most strongly. So when she chides him constantly for his disobedience, or his temper tantrums, or his untruthfulness, or his lack of perfect cleanliness, but says nothing about her love for him and never assures him of the fact that he means more than anything else in the world to her and to his father, he cannot be blamed for jumping to the conclusion that his misdeeds and shortcomings are of much more importance in their eyes than either their love for him or their satisfaction in whatever good points he may have. He is convinced that there are few or none of these, because his mother never mentions them.

It never occurs to a mother of this sort that her child can possibly doubt her love for him, or her pride in his good qualities. She is so anxious to have him perfect that she takes it for granted she must iron out his imperfections. Looking at the trees, she loses sight of the forest. The child as a result gets the impression that he is a miserable failure, that no one could possibly love such a total loss, and that his position in the family is that of an unwanted interloper. The mother, by her maladroit management, has brought to pass the deplorable state against which the psychologist she thinks she is following has warned her—the lack of a sense of security.

In the course of my work I am called on to combat much misconduct, to try to straighten out many emotional twists and warpings, to try to disentangle complex and dis-

tressing situations. Most of these "problem children" are the direct result of the misguided though intensely conscientious efforts of parents, and especially mothers, whose intelligence is high enough to have warned them of the dangers which they have been strewing in their children's pathway. Oddly enough, the ignorant mother, though she meets with other difficulties, generally escapes the emotional conflicts that beset the overconscientious mother. Children seem to thrive on a certain amount of wholesome neglect of their psychologic development, provided there is a sound emotional tone in the home, and—still more important perhaps—provided that the child is furnished with desirable models of thinking, feeling and acting in the persons of his father and mother. The "wholesome neglect" in such families is more apparent than real, for open discussion of difficulties is usually provided, and there is generally present a frank, unashamed love for each other and for the other members of the family on the part of the father and mother.

Many parents fear "spoiling" their children by showing them that they love them. Such genuine expressions of affection, far from spoiling children, are among the most helpful educative influences that can be brought to bear on them. It is carping criticism, the failure to properly appreciate the limitations of the little child, coupled with an overemphasis on the need of getting perfection and getting it quickly, that brings about many of the most distressing of the problems that plague little children and their mothers.

What these mothers need most is a sense of proportion, a realization of perspective, a consciousness that the whole is greater than any of its parts. Most of the things that worry mothers most this year will have been completely forgotten a year from now. Why not relegate them to their proper proportions in our thinking right now and enjoy our children, taking pleasure in them instead of looking for the flaws that time and experience can be counted on to take care of?

As Froebel, that great lover and educator of little children, once said: "Come, let us live with our children."

Don't imagine you are different

—start using Tampax now!

NO BELTS
NO PINS
NO PADS
NO ODOR

First a few women discovered it. Then the news spread, until today, millions in many countries are using Tampax : . . Remember, this product is not limited to "special" users. Many swimmers, bikers and movie stars have adopted Tampax, but it is designed every bit as much for the less strenuous woman at home or in the office.

Wouldn't you too like to be free from the harness of belts, pins, pads? Then try *Tampax*, which is worn internally. No external odor, no chafing, no bulges, no sanitary deodorant. Quick changing. Easy disposal . . . Of course it is invisible and the wearer cannot feel it. Ingeniously perfected by a doctor, Tampax is made compactly of pure absorbent cotton, with dainty patented applicator, making insertion quick and easy.

Tampax comes in 3 different *absorbencies:* Regular, Super, Junior. A month's average supply will go into your purse. You can wear Tampax in tub or shower; it's very convenient. Sold at drug stores, notion counters. Introductory size, 20¢. Economy package lasts 4 months. Tampax Incorporated, Palmer, Mass.

Guaranteed by Good Housekeeping

Accepted for Advertising by the Journal of the American Medical Association.

3 Absorbencies
REGULAR
SUPER
JUNIOR

TAMPAX INCORPORATED
Palmer, Mass.

HY-53-T

Please send me in plain wrapper the trial package of Tampax. I enclose 10¢ (stamps or silver) to cover cost of mailing. Size is checked at right.

( ) REGULAR
( ) SUPER
( ) JUNIOR

Name_____

Address_____

City_____ State_____

VVVVVVVVVVVVVVVVVVV

ME?
SINK A
SUB
?

YES, you! You can help provide the depth charge that will sink a Nazi sub—save thousands of American lives—insure more supplies for our fighting forces!

Just buy U. S. War Bonds—buy them with every single penny you can save. They're a powerful way in which you can make Victory ours!

And remember, U. S. War Bonds are the soundest, most productive investment you can make—one that pays you back $4 for every $3 at the end of 10 years.

BUY
WAR BONDS
TODAY!

Published in cooperation with the Drug, Cosmetic and Allied Industries by

Carl Weeks, President
The Armand Co.
Makers of Armand Cosmetics

VVVVVVVVVVVVVVVVVVV

Army Safety Engineers

(Continued from page 357)

miles of electric power lines, and the moving of many thousands of tons of earth.

The Safety Section made a detailed analysis of 12,395 lost time injuries sustained by employees of contractors in 1941 on the Army emergency construction program, and thereby brought to light some additional significant facts concerning typical accident experiences.

The predominant age group involved in accidents is that of 25 to 29 years, indicating that the relatively young workers, because of their physical agility, take chances and ignore hazards.

The study shows further that one of the principal problems of emergency construction is that of assimilating the new employee. This is definitely indicated by the fact that 44 per cent of those injured had been on the job four weeks or less and that more than one-fourth of this group sustained injuries in their first week of employment.

Nearly one-half of the injuries sustained were bruises and abrasions, with strains of various types second in number and fractures third. The most prevalent type of accident is that which results from falling or flying objects; one in every five was of that nature.

All accident statistics compiled by the Safety Section of the Army Engineer Corps are prepared in conformance with the standard accident reporting system of the National Safety Council. The latter defines such terms as lost time injury, time charges for total and partial disabilities, and the formulas for computing frequency and severity rates, so that their exact significance may be clear to the layman: A lost time injury is one which prevents an employee from returning to work on the next regular work day or shift. Frequency is the number of disabling injuries per 1,000,000 man hours of work. Severity refers to the number of days lost per 1,000 man hours of work.

More than 600 professional safety engineers and inspectors of the Corps of Engineers compose the organization which is waging relentless war on waste of manpower, equipment and materials caused by accidents. The task has been made extremely difficult, not only because of the necessity for constantly assimilating "green" workers but because the construction program includes such a great variety of hazards. It embraces such items as maintenance and repair of canal locks and draw-bridges; erection of pontoon emergency evacuation bridges; shipbuilding and repair; channel and harbor dredging; erection of dykes and huge flood control bulkheads; building of airplane landing fields and Army air bases; troop houses with all appurtenances for approximately three million soldiers; internment camps; wharves, docks and breakwaters; ordnance plants with production capacities of thousands of tons of high explosives; all types of guns, tanks and other armaments.

Accident prevention clauses in all construction contracts require that contractors comply with prescribed safety requirements, and it is the job of resident safety engineers to see that these requirements are complied with in full. Enforcement of safety requirements is also effected by talks to workers as well as disciplinary actions, and, if necessary, suspension of work at the expense of contractors until enforcement is up to standard.

As an indication of how seriously the safety organization is taking its job, its members are making more than 10,000 recommendations a month for elimination or correction of accident hazards and for prevention of fires; all accidents are carefully analyzed and steps taken to prevent recurrence.

Despite the importance of the work done by the Safety Section, a natural consequence is that the greater the success, the less publicity and furore accompanies the job. That fact, however, should not prevent the American people from recognizing that these men are contributing in a vast measure toward the conservation of manpower for warpower.

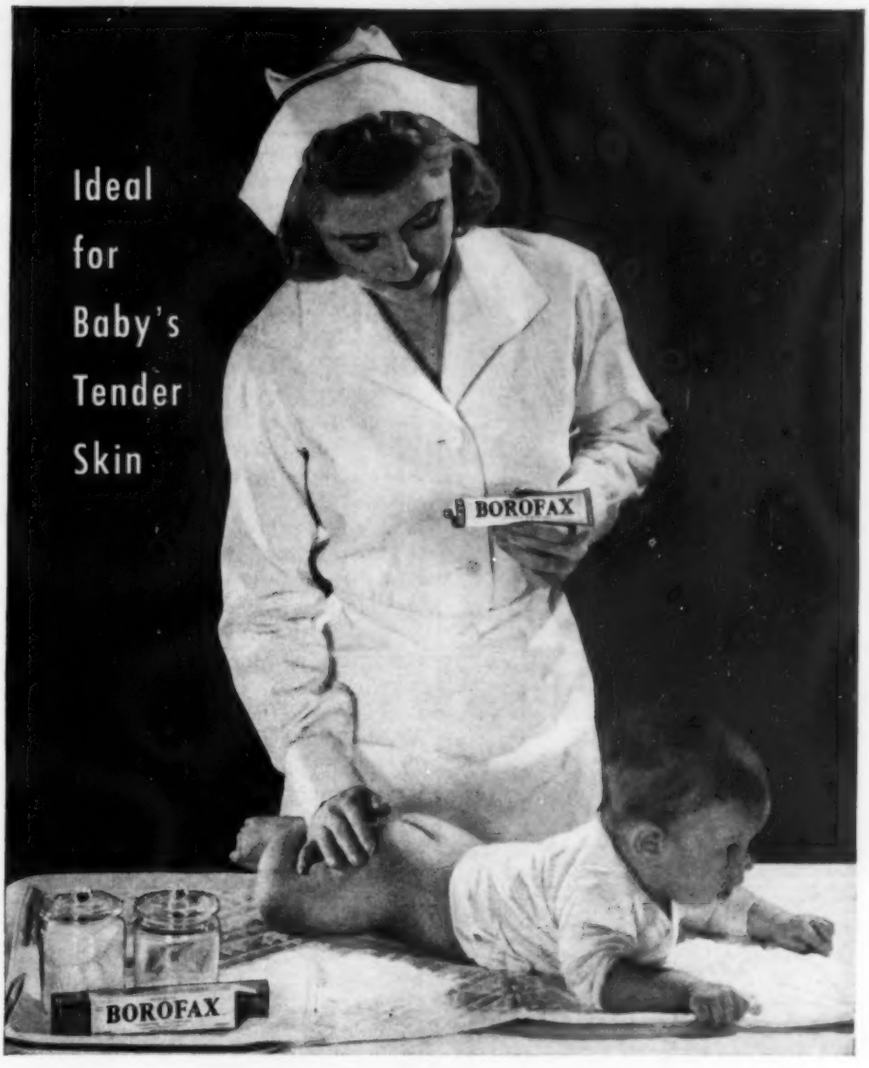
Control of Tuberculosis

(Continued from page 343)

cut and unmistakable picture of infection. Technic was improved, and a test was evolved consisting of an intradermal injection of tuberculin in the tail fold of the cow. It could be administered and interpreted by any competent veterinarian. Produced on a large scale, tuberculin went down in price until the cost of administration was only about 30 cents a head. In 1908, Melvin published the results of testing with Bureau tuberculin by state and city authorities. Of 400,000 cattle tested, 9.25 per cent were found to be reactors. The records also revealed that of 24,784 reactors slaughtered, 98.39 per cent had visible lesions in their bodies!

Hitherto, dairymen and cattle breeders had remained skeptical about the test. Sometimes the healthiest, sleekest cows in their herds reacted. It was impossible to believe that these animals were sick and dangerous. But they had to believe what they saw at the dissections, and with such results before their eyes they began to be convinced. In that same year, Dr. Melvin made history when he signed for a Maryland dairy farmer the certificate for the first accredited, tuberculin-tested herd in the United States.

Dr. Ernest C. Schroeder directed more and more of the laboratory research toward tuberculosis control. One of the earliest questions confronting him was how to check the spread of the disease from animal to animal. Excluding the infected animals themselves, among the suspected carriers were the rats and mice which infested the barns, nibbling at the grain in the mangers and scampering in the straw under the feet of the livestock. Dr. Schroeder proved that these rodents could harbor the disease in their own bodies for a long period and transmit it to other animals without themselves falling ill. Thus quarantine and disinfection of the barn by chemicals were useless unless the rats and mice were destroyed.



TRADE MARK **'BOROFAX'** BRAND

BORATED OINTMENT

Containing 10% of Boric Acid in a bland emollient base

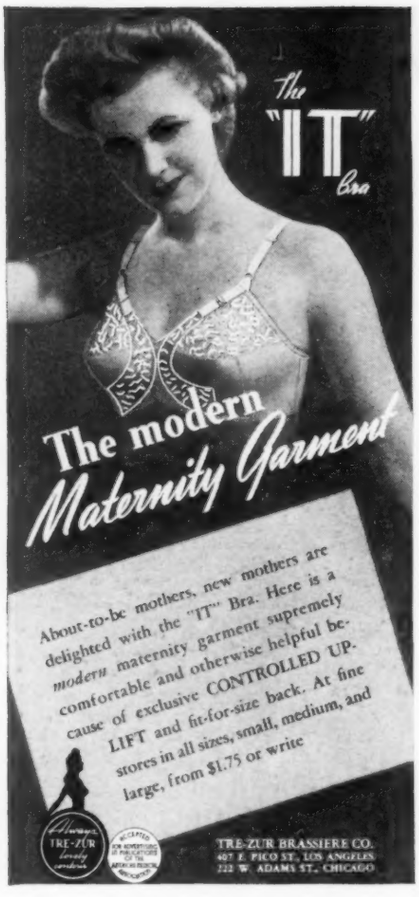
SOOTHING • EMOLLIENT • WATER-RESISTANT

Even though you may not be a trained nurse, it's so easy to give your baby's skin the same care it received at the hospital. Cleanliness is of the greatest importance, of course, but you will find 'Borofax' Borated Ointment an invaluable aid in helping to protect your baby's delicate skin against chafing and irritation. This protective, water-resistant ointment helps to counteract excessive drying of the skin and is often prescribed to relieve the irritation caused by wet diapers. Soothing and protective, 'Borofax' is truly ideal for baby's tender skin. Try it. Your baby will sing his approval.

Available in tubes of ¾ oz.—25¢; 1¾ oz.—50¢; jars of 1 lb.—$2.50 at your drug store.

BURROUGHS WELLCOME & CO. (U. S. A.) INC.

9-11 EAST FORTY-FIRST STREET, NEW YORK, N. Y.



Try Shopping Among HYGEIA Advertisements

THE TEST OF
CONTINUED USE

★ Many women have accepted NONSPI as a "must" among their toiletries. They have proved to themselves by continued use that its gentle astringency helps to close the underarm perspiration glands. And they have found that where there is no moisture there can be no unpleasant odor.

★ A single application of liquid NONSPI acts to check underarm perspiration for periods up to three days, if used in accordance with the directions. Correctly applied, it will not injure delicate fabrics.

★ NONSPI is offered as a cream for quick refreshening, and as a liquid for longer care. Ten cents brings you a generous trial supply of Liquid NONSPI.

Write to NONSPI Co., 113B West 18th Street, New York City.

NONSPI
Liquid • Cream
NO PERSPIRATION — NO ODOR

Schroeder established many extremely significant facts about tuberculosis in cattle. For example, he proved that the disease is not inherited in any sense of the word, and that only a small fraction of 1 per cent of calves are born with congenital tuberculosis. He proved that only a brief exposure of a healthy animal to one that has contagious tuberculosis is necessary to transmit the disease, thus completely repudiating the old belief that long and intimate contact is necessary. Particularly did Schroeder perform a valuable service in testing the purity and potency of biologic products used in veterinary medicine, such as tuberculin, and in checking dairy products such as cream, cheese and butter to determine whether they harbored tubercle bacilli or were fit for food.

After Dr. Melvin's death, when Dr. John Mohler became Chief of the Bureau of Animal Industry and Dr. J. A. Kiernan chief and Dr. A. E. Wight assistant chief of the Tuberculosis Eradication Division, it was decided to develop a nation-wide campaign against tuberculosis in cattle. The county was to be the unit, and any county in which testing revealed that not more than 0.5 per cent of all the cattle were infected with tubercle bacilli would be rated as "modified accredited." In a few counties, the first testing showed this low incidence of tuberculous infection; in other counties, particularly those of New England, the Atlantic seaboard, the Midwest and the Pacific Coast, more than 15 per cent of the cattle reacted, and in many herds 25 to 50 per cent. In these counties, several years were required to reduce tuberculous cattle to 0.5 per cent of the entire cattle population. In 1935, the tuberculin test was administered to more than 25,000,000 cattle, and the total expenditure that year for administering tests and reimbursing the owners for those which reacted was more than $26,000,000.

Like all good work, the tuberculosis eradication program was severely criticized. Some of the opponents were racketeers; they convinced cattle owners that their state and federal governments were doing them injustices and that their rights should be defended. They organized cattle owners and collected fees to be used in state and national legislatures to stop the tuberculosis control program. Usually, as soon as the fees were collected the racketeers vanished to greener pastures and the cattle owners were left undefended. Nevertheless, bitterness toward the government developed among them; they believed the false statements of the racketeers rather than the truthful statements of their local, state and federal veterinarians. The work of the veterinarians, however, was on such a scientific foundation that nothing could do more than retard it. Cattle owners who were misled by racketeers and opponents of good health measures often found themselves in embarrassing and unprofitable situations; for example, great cities where they had marketed their dairy products passed ordinances prohibiting the entrance of milk, butter and even milk powder from areas where the modified accredited rating had not been won. The markets were closed to owners of such cattle.

Despite the opposition, the veterinarians' program continued to succeed, and in November 1940 every county in the entire nation had been accorded the modified accredited rating. From 1917 to 1940, the veterinarians administered 229,714,023 tuberculin tests to cattle, and examined at postmortem 3,768,201 reactors. These postmortem examinations proved beyond a shadow of doubt that the tuberculin test is highly accurate in detecting tuberculosis. While the modified accredited rating does not mean the complete eradication of tuberculosis among cattle, it does mean that eradication is closely approaching.

Certain forms of tuberculosis that were previously so prevalent among human beings in this country have almost vanished with the control of tuberculosis in cattle. Wherever

WANTED

Copies of the March and April 1943 issues of HYGEIA. Fifteen cents will be paid for each copy returned before May 25, 1943, to:

THE AMERICAN MEDICAL ASSOCIATION
HYGEIA SUBSCRIPTION DEPARTMENT
535 NORTH DEARBORN ST.
CHICAGO, ILL.

the cattle herds were accredited there was a subsequent sharp decline in mortality, morbidity and tuberculin reactions among human beings. Indeed, at the present moment there is not enough tuberculosis of the cattle type among human beings in this country to teach the students of nursing and medicine what they should know about this disease.

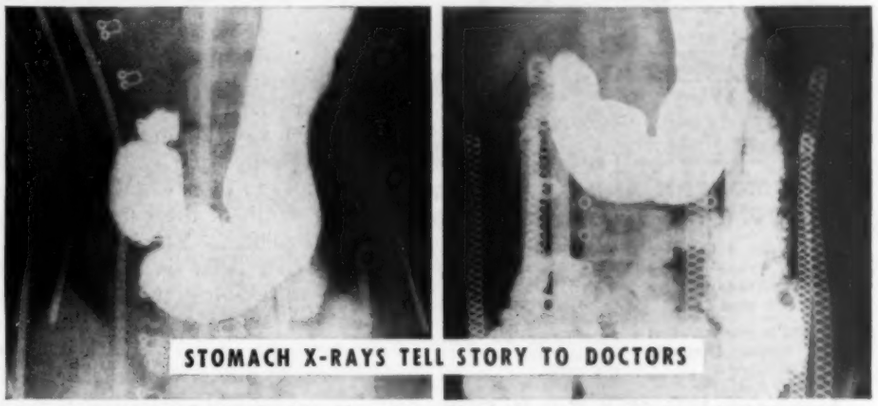
The contrast between this country and those parts of the world where tuberculosis among cattle has not been controlled is striking. For example, in some European countries approximately 50 per cent of the persons who have scrofula and 50 per cent who have tuberculosis of the skin contracted it from cattle; 25 per cent of the cases of fatal meningitis and 20 per cent of those with tuberculosis of the bones and joints and genito-urinary tract are of the bovine type. It has also been shown in some parts of the world that from 1 to 6 per cent of tuberculosis of the lungs in man is contracted from cattle. Tuberculosis of the cattle type in man may be just as incapacitating and fatal as that of the human type.

There are several other diseases of animals which are transmissible to man; among these are anthrax, glanders, rabies (hydrophobia), and Brucellosis. Wherever veterinarians have controlled these diseases among animals, they have practically disappeared from human beings. In some parts of the world, rabies is still a serious disease among the people because it is permitted to exist among animals, particularly dogs. Although a few persons in the United States still develop this disease, it has become extremely rare. Brucellosis is transmitted from animals which have Bang's disease. It is extremely difficult to control once it develops in the human body. The veterinarians of the United States are now engaged in a great national campaign to control this disease in domestic animals; they have a satisfactory test to diagnose it in animals, and those which are found to have it are being slaughtered, just as were those found to react to the tuberculin test. With the full cooperation of the public, the veterinarians will solve another large economic problem and remove another serious disease from the human family.

DON'T WORRY ABOUT RUBBER FOR CORSETS!

Doctor's X-ray pictures show how to get healthful figure support without rubber or straps!

If lack of rubber for corsets, and the prospect of having to wear clumsy straps and belts is one of your worries—cross it off your mind!
Where the ordinary corset has to stretch like a rubber bathing cap to fit several types of figures, your Spirella is made for you. It does not depend on rubber for support. It uses no belts or straps. It is cut and fitted to your measurements taken by the Spirella figure support expert with the help of the Patented Spirella Modeling Garment. And it's all done in the privacy of your own home, away from crowds, noise and confusion!



Show these to your family physician if you like. The X-ray above shows how an ordinary constricting corset crowds the stomach downward, its cramping pressure always menacing health and comfort.

Here's the same woman in an individually designed Spirella. The X-ray shows the stomach raised about 3 inches—comfortable *natural* support that makes you look younger and feel younger!

LET THIS SIMPLE HOME TEST CONVINCE YOU TONIGHT!

Press down on stomach. That's the constricting pressure of the ordinary corset. *Isn't it uncomfortable?*

Lower hands and lift up. That's the *natural* healthful support you get with Spirella. *Doesn't it feel better?*

So easy, it almost sounds far-fetched. But try it when you undress tonight and learn *quickly* what Spirella support can mean. Hundreds of women have found through the "Press and Lift" test the way to feel more comfortable, and at the same time take years off their figure.

Call the Spirella figure support expert in your community tomorrow, or mail the coupon. Find out for yourself what a pleasure and comfort it is to have your own Spirella, made to your own measurements. It will last longer, serve you better and you feel 10 years younger.

TO WOMEN WHO WANT TO MAKE MONEY HELPING OTHERS

If you are not in a position to do full time war work, you can help other women find new comfort and happiness—and at the same time add to your own income. Mrs. M. L. G. (name on request) writes, "Two children prevent my volunteering for full time war work, but I help hundreds do their jobs better with Spirella figure supports. Last month I made $137 from my business—and dozens of new friends." Why don't you mail the coupon?

LOOK TRIM AND KEEP FIT WITH Spirella INDIVIDUALLY-DESIGNED FIGURE SUPPORT

SEND FOR FREE "KEEP FIT" BOOK

The Spirella Company, Inc.
Dept. M-11, Niagara Falls, N. Y.

☐ Send me your free book, "Keep Fit".
☐ Tell me how I can start my own profitable Spirella business.

Name _____

Address _____

City _____ *State* _____

In Canada, write The Spirella Co., Niagara Falls, Ont.

is your HEARING IMPAIRED?

For the sake of your future happiness, use the coupon below to secure information on

Otarion

AMERICAN MEDICAL ASSOCIATION ACCEPTED COUNCIL ON PHYSICAL THERAPY

THE MODERN AND IMPROVED VACUUM TUBE HEARING AID

- Reproduces a broader range of sounds—from the song of birds to the deep tones of a brass drum.
- Fitted to your individual requirements. Simple to operate.
- Small and light—amplifier weighs only 3 ounces. Free from internal noises.
- Inconspicuous. Economical.
- Guaranteed one year—excepting the batteries and cords.

OTARION, INC. 448 N. Wells St., Chicago

Please send me full information about the Otarion.

NAME.....

ADDRESS.....

CITY.....

MODERN-MOTHER Nursing Brassiere

Has interchangeable sterilized pads to absorb all seepage.

- Maternity Brassiere, ≠627 with adjustable elastic back section to allow for increasing development during pregnancy. Sizes 32 to 44. $2.50.
- Bandeau Style, ≠628 for slender figures in sizes 32 to 38. $1.75.
- Regular Style, ≠623 in sizes 32 to 44. $2.25.
- Streamlined Style, ≠629 has added sleekness, greater uplift and none of the familiar "harness" effect. Full cup shape and adjustable straps and back. Sizes 32 to 40. $2.00.
- ≠630. Same as ≠629. Streamlined in mesh. Sizes 32 to 40. $2.25.

If your dealer cannot supply you, write Dept. H.

VENUS CORPORATION
1170 Broadway, New York, N. Y.
Branch: 424 S. Broadway, Los Angeles, Calif.

What's a Hair's Breadth?

(*Continued from page 351*)

an inch long, and one eighth of an inch thick. It has a narrow slot, three eighths of an inch long, into which can be packed from 150 to 200 hairs, depending on their thickness. These hairs are washed in carbon tetrachloride, dried and packed into the slot.

Next, the hairs are cut off even with the metal plate on both the top and bottom sides of the plate. They then are pushed partly through the slot by means of a metal screw, so that the depth of the cross sections can be regulated. The layer of protruding hair tips is next coated with a thin solution of celluloid. When the solution containing the hair hardens, it is cut off with a sharp razor blade, and the area of individual hairs is determined with the aid of a microscope.

In all of his work on hair sections so far, Dr. Steggerda has used a hair sample taken within a few millimeters from the scalp in the occipital—the lower part of the back of the head—region. The section that was measured was made at about 20 mm. from the cut surface to make certain that the results would be uniform.

Dr. Steggerda arranged his hair samples in classes so that the trends which occur in the shafts could be seen at a glance. For area, the tendency is to increase as the shaft grows out from the head, but for the index, or the ratio of the maximum diameter to the minimum, the tendency is to decrease as the hair is farther from the scalp. Not one of the hair samples decreased steadily in area, and not one steadily increased in index. According to Dr. Steggerda, the meaning of this is not quite clear. Undoubtedly, long hair is elastic and hygroscopic—that is, able to absorb or condense moisture from the atmosphere—and its size and shape are likely to be influenced by environment. It is doubtful that dressing the hair alone causes the changes, because there is no consistent difference between the hair of whites and of Indians, and Maya women rarely do anything to their hair except wash it. From these observations, the natural conclusion is that the hair flattens out and expands in size as it grows.

The fact that hair color darkens with age, prior to the time it turns white, is of course generally known. The degree or speed of such darkening has never been measured quantitatively. The material used in this study has the advantage over others that it consists of a longitudinal series of growing children measured and recorded over a ten year period. The sample consists of 220 male and 194 female children ranging in age from 6 to 18, all of American Dutch stock. Each time they were measured the hair color was matched with a color scale on which the graded samples run from a light blond to a pure black.

If the colors are split into three groups—blond, medium and dark—and the frequency calculated for each year of age, one finds a steady decrease in the blond group and a corresponding increase in the dark group. Results of accurate calculation indicate that for each added year of age, the hair color will change almost one unit of the scale. Red hair also darkens. It is evident, therefore, that racial comparisons of hair color must be made with the clear conception that hair color is not a stable physical characteristic during the growth period. Due allowances should be made for any hair material that has been analyzed from populations of unknown age. All these racial and individual hair differences—the fact that the Maya have the largest hair in cross section and the Dutch the smallest, that the Negro hair is most elliptical and the Maya the roundest—these and the various others enumerated are statistically of great significance. This study done by the Carnegie Institution research workers is the first time in history that racial differences in hair shape have been subjected to statistical analysis. Such analysis was previously impossible due to the limitations of the old technic. The new technic, according to Dr. Steggerda, admittedly is in its infancy, and much work must be done before it proves of value for other than anthropologic work.

Your Child's Hearing

A program for testing the hearing of all school children gets health results

By VERONICA B. McKINNY

THE LAW of New York state requires that the hearing of every child be tested annually. The main objective of the state conservation of hearing program is to bring optimum hearing health to every child. School nurse-teachers, whose duty it is to make these annual tests, are therefore concerned with preventable loss of hearing and with various measures which will make for success and happiness in the lives of children with impaired hearing.

Other advantages of this program are obvious. Selected studies demonstrate that more hard of hearing children show school retardation and grade repetition than do children with normal hearing. The primary objective is to provide the same educational advantages for the hard of hearing students as for those with acute hearing. A supposedly mentally retarded child may change to a bright student when compensation is made for the impairment of hearing. This may be done either by training in lip reading or, in more advanced cases, by the use of a mechanical hearing aid. Hearing aids are as essential for the satisfactory school progress of some children as lenses are for those with impaired vision. Estimated costs of giving audiometric tests with the objective of using corrective measures are much lower than the costs of providing for grade repeaters.

Speech defects occur even when there is a slight loss of hearing. Such emotional difficulties as submissiveness, shyness, solitariness and leadership inability are more likely to arise in the lives of these children than in normal children who differ only in respect to hearing. However, the well adjusted hard of hearing child who has learned to face his problem shows the same essential characteristics as any well adjusted child. The parent's attitude toward the handicap is the major adjustment, as the child's attitude will depend on that of his parents.

In accepting this legally imposed responsibility, the school administration and board of education of Garden City, Long Island, have set up a model program which has functioned to the benefit of many children. All children are tested by a phono-audiometer to screen out those who have definitely impaired hearing or probable impaired hearing. This is done in groups of forty from the third grade through the high school. Children of the kindergarten, first and second grades must be tested individually.

All children who show a loss of nine decibels (about 9 per cent) in either or both ears on the first test are retested on the same instrument after a period of time during which recent colds and other temporary conditions have cleared up. If the loss is still apparent, individual tests are then given on the pitch range audiometer.

You Can Trust PYREX Nursing Bottles

GUARANTEED REPLACEMENT If Broken from Temperature Shock

Take PYREX nursers from refrigerator to hot water with complete confidence! These trustworthy bottles are famous for their ability to withstand sudden temperature change.

Air-Vent

The AIR-VENT lets air circulate inside nipple—helps prevent colic. Baby takes food easily, gains every week. Get the best for your baby—PYREX!

PYREX BRAND NURSING BOTTLES WITH THE PATENTED Air-Vent

Made by Corning Glass Works
Distributed by Owens-Illinois Glass Company

GUARANTEED REPLACEMENT If Broken From Temperature Shock

Mother—

DOES YOUR CHILD SUCK THUMBS? BITE NAILS?

THUM is the effective means to discourage these unhealthful habits. Directions on bottle. Remove from fingers with nail polish remover.

USE THUM TRADE MARK

EASY TO USE APPLY LIKE NAIL POLISH SOLD AT ALL DRUGSTORES

50¢

THUM contains capsicum 2.34% in a base of acetone, nail polish and isopropyl

This operates with a series of high frequency tones in eight octaves. On this test, it is possible to determine in what pitch the loss is located and where the hearing is normal. For instance, a child with a loss of high frequency sounds may have difficulty in hearing high pitched voices but hear deeper voices normally. The state law further requires the school administration to provide the services of an ear specialist so that all cases of hearing impairment may have expert diagnosis and advice regarding treatment.

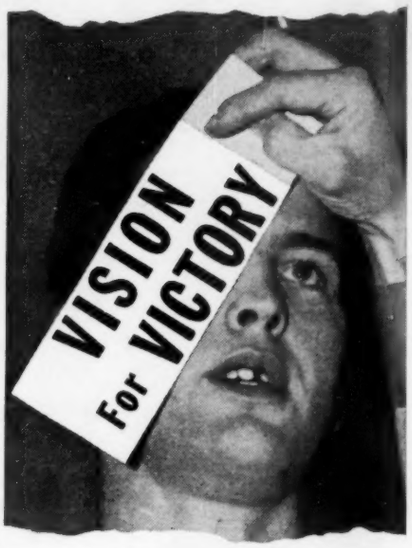
In Garden City, a temporary clinic is set up each year in all schools, and all cases of hearing impairment are examined by Dr. Page Northington. Many parents attend. The cause of the loss is explained, and advice is given about the possibilities of recovery. In remediable cases, treatment is advised. Children with a loss of 20 per cent in the better ear, or children whose loss is considered progressive, are given first row seats in classrooms and are referred to lip-reading instruction.

Supplementing these measures, a mechanical hearing aid may be necessary for satisfactory schooling when the loss of hearing in both ears is greater than 30 per cent. A full report is mailed to the parents in each case, since the most desirable results for the child can be obtained only through their cooperation.

In the past year, four children with some loss of serviceable hearing have been restored to normal or better than normal hearing as a result of these clinic sessions. Many others have been advised to take corrective measures. Six children have made vast academic improvement following lip-reading instruction, four having received this instruction in the Garden City schools and two outside.

What are the possible indications of hearing impairment? Earache, pain, itching or tenderness in or about the ear, discharges, head noises, blocked feeling, frequent colds, frequent mistakes in carrying out directions and overattention to the mouth of the speaker are important signs; also peculiar position of the head, inability to hear at a distance (crawling up on the speaker) and frequent requests to have words repeated.

DOCTORS AT WAR *presents*



In the April 24 broadcast of DOCTORS AT WAR the importance of good eyesight will be emphasized. The civilian airplane spotter, the Navy gunner, the aviator, the precision workman in industry—all need good vision for victory. How to preserve the eyes and make the most of them will be the subject of DOCTORS AT WAR on April 24. The guest speaker will be Lieutenant Colonel Harold C. Lueth, Liaison Officer, Suregon General's Office, U. S. Army.

Other vital topics soon to come:

May 1. **"Jungle Death."**
May 8. **"Drugs March to War."**
Guest speaker: Austin E. Smith, M.D., Secretary, Council on Pharmacy and Chemistry, American Medical Association.
May 15. **"High Air."**
May 22. **"Flash Burns."**
Guest speaker: Rear Admiral Ross T. McIntire, Surgeon General, United States Navy.
May 29. **"Sick Call."**

Saturday—Coast to Coast N. B. C. Network

5 p. m. EWT. 4 p. m. CWT. 3 p. m. MWT. 2 p. m. PWT.

Additional Broadcasts—W. L. S. The Prairie Farmer Station

"BEFORE THE DOCTOR COMES"

Mrs. June Merrill interviewing Dr. W. W. Bauer.
Thursdays, 9:45 a. m.

April 29. **"What To Do About Bleeding."**
May 6. **"The Listless or Irritable Child."**
May 13. **"The Child with Growing Pains."**
May 20. **"The Child with 'Nervous Habits.'"**
May 27. **"When To Immunize and Why."**

a little behind on our **EVENFLO** *orders!*

Like Topsy, the demand for Evenflo Nursers has "grown and grown." Even before the war, Evenflo sales increased 50% to 100% a year.

Now with rubber rationing and increased birth rate, it is hard to keep all stores supplied. Though we fairly apportion shipments to the trade, the great demand for modern Evenflo remains only partially satisfied.

Mothers using Evenflo can make nipples and caps last longer by avoiding excessive sterilizing.

The Pyramid Rubber Co.
Ravenna, Ohio, U. S. A.

MODERN
EVENFLO NURSER
Nipple, Bottle, Cap, All-in-One, 25¢

"Mother's Helper"

BOOKLETS ON CHILD CARE

KEEPING YOUR BABY WELL—General advice on infant care and feeding. 24 pages. Single copy, 10 cents. 10 copies, 75 cents.

BAD HABITS IN GOOD BABIES—By Herman M. Jahr. Covers crying, thumb sucking, head rolling, feeding difficulties, bowel and bladder control, shyness, stubbornness, and self-expression. 16 pages. 15 cents.

WHAT DOES YOUR BABY PUT IN HIS MOUTH?—By Chevalier Jackson and Chevalier L. Jackson. Tells how to prevent accidents from choking and what to do if they happen. 24 pages. 10 cents.

THE TRUTH ABOUT CANDY—By Morris Fishbein. When and how to use candy. 4 pages. 5 cents.

PROTECTING THE HEALTH OF THE CHILD—By Elizabeth Cotton. Discusses the responsibility of the parent and of the school. 8 pages. 10 cents.

WHAT TO DO ABOUT THUMB SUCKING—By William I. Fishbein. 6 pages. 10 cents.

THE FAMILY HELPS THE SPASTIC CHILD—By Belle McKinnon. 16 pages. 15 cents.

AMERICAN MEDICAL ASS'N., 535 N. Dearborn, Chicago

The chief causes of hearing impairment are infection and damage to the middle ear. Acute infectious diseases, tonsillitis, or frequent head colds may cause abscess of the middle ear. Temporary impairment is sometimes caused by hardened wax or foreign bodies. Cotton pledgets which have been inserted are sometimes forgotten and become encased in wax. No one but a physician should ever attempt to remove any such matter, as the ear canal is narrow, winding and easily injured.

We can best protect our children against hearing impairments by securing medical treatment and supervision of all ear trouble and of all communicable disease, since much ear trouble follows these diseases; by keeping children at home under proper care when they have a cough, cold or sore throat; by not using medication in the ear except under orders of a physician; by teaching children to use handkerchief or tissues to cover sneezes and coughs, and to blow the nose gently; by urging them to refrain from placing foreign objects into ears, nose or mouth; and by avoiding high diving. One having nose or ear disease should do no diving or swimming with head beneath the surface except on the advice of a physician.

For those with permanent hearing impairment, adjustment to normal living can be made today more easily than ever before. The study of lip reading is fascinating, and many children equipped with this tool and with proper guidance in vocational selection become well adjusted, self-supporting adults.

The New York League for the Hard of Hearing, a nonprofit organization, is a center of information. It is equipped to organize lip-reading classes where there is a demand and to advise about various types of hearing aids. It also conducts an employment agency for the hard of hearing. Its social affairs have opened new vistas and offered new hope to many previously cut off from social contact. Hard of hearing children must be encouraged to assume as much responsibility as they can without strain, to be frank about their loss of hearing and to avoid hiding behind their defect. Thus they can develop a feeling of security in their ability to work and play successfully and to get along with others.

Keep Baby Safe!

PAT. NO. 2161058
Here's PROTECTION *with*
BABEE-TENDA Safety Chair

Falling high chairs cause many serious and fatal accidents each year. Your Baby is ever so much SAFER in a BABEE-TENDA Safety Chair because it is low and can't be tipped or pushed over. A Safety Halter Strap positively prevents Baby from climbing out. "SAFETY FIRST" is the best policy—the BABEE-TENDA Safety Chair is highly endorsed by leading Baby Specialists, Hospitals, and Nurses. *It is about as high as the seat of a dining-room chair, 22" high by 25" square.* Can be used outdoors and is easily rolled from room to room. Folds compactly for traveling. After baby outgrows the seat, it can be converted into a sturdy play table.

NOT SOLD IN STORES

SOLD DIRECT TO YOU. WRITE US FOR FREE INSTRUCTIVE FOLDER AND PRICES

THE FORT MASSAC CHAIR CO.
750 Prospect Ave., Dept. HM Cleveland, Ohio

Sterile
because it's
FINGER PROOF!
Keep Your Baby GERM FREE!
with this one-piece Screw-on Nipple

THE hand that fills the bottle can never contaminate your baby's formula when you use Baby-All Natural Nurser. For the Baby-All "no-colic" Nipple screws on to the bottle easily — without spilling and without the possibility of your hand touching the nipple! Modern mothers value this extra protection for their babies and they appreciate the fact that baby can't pull the nipple off — because it screws on tight! Baby-All Natural Nurser, complete with finger-proof nipple, bottle, and cap, is sold at all Infant Departments and Drug Stores. Bottles available in Pyrex or plain glass.

Cap included for refrigerator and travelling

SANIT-ALL PRODUCTS CORP., GREENWICH, OHIO

Baby-All NATURAL NURSER
SCREW-ON BOTTLE NIPPLE & CAP

CIVILIAN FITNESS

(*Continued from page 344*)

has been born through necessity, born through preoccupation with urgent questions which as far as we can see in the future will require the same vigilance and skill. We need now, in addition, to organize in our medical training more interest in people as they deal with their daily work. For the young we must learn how to make a better diagnosis as to fitness for jobs or professional careers, and for older people how to deal more specifically with their anxieties and fears. We must know more about constitutional or hereditary factors, and more about the environmental forces which together mold the individual. We need as much a means of diagnosis and classification of well people as we now have when these same people become sick and disabled through disease. When this state of affairs is achieved, as I believe it will be, we shall hear less about our complexes and our vast store of repressions and know much more about our positive assets. Just as we cannot win the war by defensive means alone, we cannot win the fruits of life by knowing only about disease and our various other defects. Success comes when the credit side of the ledger substantially outweighs the debit side. Many handicaps and inadequacies fade away if positive qualities of the individual can be given an adequate expression in a job well done.

The great diseases of the country are not cancer, heart disease, high blood pressure, constipation, kidney disorders, acidity, alkalinity or all the other fearsome ailments of the radio advertisers, but they are rather the failure for the most part to have the right person in the right place, together with the harvest of discontent, worry, frustration, boredom, and inability to live with one's self. There is a greater consequent train of ineffectiveness and ill health from these sources than is due to all the specific diseases with which doctors habitually deal. Indeed, not a few illnesses, often severe in nature, appear to arise from these very sources. If this position could be understood by all for whom the die has been cast as to life work, our search should be not for health as such but for the kind of adjustments that we must make in order to live agreeably within our present circumstances. Health and fitness can only come as a resultant of such adjustments, seldom as a primary motivation amid the complexities of our modern world.

Our greatest responsibility, in my opinion, concerns not the solution of our own difficulties, but the influence we can bring to bear toward the development of greater knowledge for the use of doctors, educators and parents in the training and assortment of young people for the kinds of effort which will enable them to lead the most effective lives. We shall never have proper leadership for our people nor secure the objectives of a free society until this is accomplished to a degree far surpassing anything yet known in this country. We need less of our present methods of mass education and more of what the British are beginning to consider "patterns" of education—that is, methods and objectives suitable for the development of the particular capacities and interests of boys and girls. There has grown up in this country a tradition that a college education is essential for success. Of course, nothing could be farther from the truth. The colleges like the rest of us talk only about their successes. Not enough is on the record about their failures. Our present failures cannot be laid wholly on the doorstep of our educational system. To help out our educators there must be developed a more systematic knowledge of normal youngsters, a more effective means of diagnosis of strong points and weak points, and a greater willingness on the part of taxpayers to support schools for vocational and special types of training. Boys and girls capable of higher learning should be sorted out for this purpose instead of being selected by the present scheme, on which too much is left to the economic status of parents. There is accumulating evidence that too many boys are in college who should not be there, and that too many well qualified ones are unable for financial reasons to pursue activities for which they are by nature well endowed. Because of economic and social changes caused by the war, the postwar interests of the country are almost certain to produce intensive study of many questions of this sort. As members of the community we all have a duty, an obligation to insist that our medical schools devote more time to the study of normal people and to teaching medical students and physicians in general more about each of us, youngsters and adults, who are not prostrate with disease but who need more specific information about everyday living, about fitness and capacities for the proper performance of the vast number of jobs and careers on which the country depends for its support and from which so much of our health and comfort springs. Any constructive modification of our educational plans is intimately bound up with advance of knowledge in this general area.

What does fitness mean for those of an older generation for whom the die in many ways has been cast? Is it helped by worry, envy, escape from meeting current obligations,

BLOOD DONOR

Flow freely from my eager veins,
Oh glorious, warm, life-giving flood!
As opening clouds give forth their rains,
So would I give my blood.

Beat strong, Oh heart, beat steady, slow,
Nor for one timid moment falter;
My body is a chalice now,
My cot an altar.

Not mine in this stern, angry hour,
The sword, the bayonet, the gun,
But here within me is my power,
Mine, and mine alone.

For only I can give this gift,
My blood, of my own self a part;
Oh, I can feel my pulses lift,
And I can hear my singing heart!

—*Carrie Fall Benson.*

selfishness, domination over the family or the business, zeal for power, loose gossip? We recognize the evils of these states but find ourselves trapped by one or more of them and are too often caught in the snares of indecision. Give and take adjustments must be made every day to avoid the drain of fatigue caused by anxiety and worry.

Is there a way to surmount the dilemmas presented in the course of daily living? Any suggestions that I may make will be hard ones to adopt, hard because they involve individual action. One must be on the doing end, not on the receiving end, if positive results are to be achieved. There is no magic carpet paving the way to good living for any of us.

Have you ever given any real consideration to an old thought often expressed in the world's literature, and mentioned also in the Bible, concerned with learning to live today? Yesterday has gone, tomorrow represents the unknown. All we have is today, the present moment, yet we lament our yesterdays and bemoan what the future has in store. Anxiety about what is to come is almost universal. Regret over past mistakes clouds not only the present but also the future. It is extraordinary that we cannot learn to live today, the only time within our grasp. The evidence that we do not is shown in the real origins of most of the complaints we take to our family physician. When a young man, Sir William Osler read the famous sentence by Carlyle: "Our main business is not to see what lies dimly at a distance, but to do what lies clearly at hand." Many years later Osler said, "If I have had any measure of success at all, it has been solely because of doing the day's work that was before me just as faithfully and honestly and energetically as was in my power."

Today is what we make it. It has no space for self pity. It means doing a job today, and it should never leave out the principle of doing something for others. Self will, rationalizations to justify personal actions, moody introspection and similar reactions defeat too much of life today. The opportunity we need is on our own doorstep and is too often neglected.

Great interference with living today arises through multiple, abnormal social relationships. Parents fail to recognize the need for independence felt by their sons and daughters which becomes manifest in many ways at about the age of 15 or 16. Excessive domination or the failure to talk things over on a sensible basis develops a feeling of futility, fosters underdevelopment of a sense of responsibility and achievement, and drives young people into paths which later experience shows to have been damaging. Many a parent is trying to educate a son or daughter along the lines of his own or hoped for experience, rather than following a developmental program suitable for the individual. Irritability, jealousy, bitterness and keeping up with our neighbor all interfere with good health today. The times are trying enough without each of us adding something to the family and community gloom.

The commonest of all symptoms is fatigue. By fatigue I do not mean the breakdown caused by hard, physical labor but rather the results of wear and tear, the cumulative state that comes largely through failure to live today. It is the product of worry, grief, disappointment, family situations, economic distress. It is associated with jobs for which we are unsuited. It comes from striving for ends beyond our reach, or it may appear because some of us have nothing to do. It is the fruit of tense living. If long continued, it may break the strongest of us and appear in body responses simulating many types of organic disease. It seems to play a large role in the production of many cases of gastric ulcer, high blood pressure, hyperthyroidism and many other serious conditions. Some of these can be cured by proper understanding through reeducation, while others are irreversible. In the process of development of fatigue the wear of today is imposed on the tear of tomorrow. In everyday life the body experiences both breakdown and repair. Prevention of chronic fatigue can occur only when these processes are in balance. Such an achievement cannot be attained unless daily living brings satisfaction, a good measure of contentment, and a chance for relaxation in some form of diversion.

(This is the first of two articles on fitness by Dr. Bock. The second will appear in HYGEIA for June.—Ed.)

First, they are deftly designed to trim down bulges and to give truly tonic diaphragm support. They have the added advantage of keeping up this good work through a long, hard life—because their fine materials and superior workmanship withstand plenty of wear and tear.

Shown above *"Allo" Long-Line. *"Intimo" (left) also comes with 6-inch band. Send for *free* Foundation Style Booklet X: Maiden Form Brassiere Company, Inc., New York, New York.

Maiden Form
LOOK FOR THIS TRADE-MARK ON BRASSIERES

"There is a Maiden Form for Every Type of Figure!"

Mention HYGEIA when writing to Advertisers

DAVIDSON No-Colic
SCREW-ON NIPPLE

Screws on bottle with a mere twist of the fingers. Baby can't pull it off.

Sanitary—your fingers never touch the feeding surface.

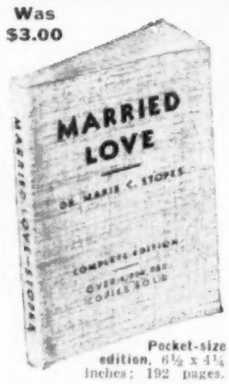
Ask your druggist also for 8-oz. Screw-Top Bottles, Baby Bunting or Pyrex. Davidson's Screw-On Cap—for air-tight, liquid-tight protection—keeps formula sanitary.

DAVIDSON RUBBER CO.
Boston, Mass.

Quality Rubber Goods since 1857

For
Your Skin's Comfort and Protection
USE
Nivea Creme
OR ITS LIQUID FORM
Nivea Skin Oil AND
SUPERFATTED BASIS SOAP
Available at prescription pharmacies
Nivea, Basis Soap, Reg. U. S. Pat. Off.
DUKE
LABORATORIES, INC.
STAMFORD, CONN., U. S. A.

"Cracking Up"
Under the Strain
SOME practical suggestions for preserving mental and physical health. By Edgar V. Allen. 18 pages. 10 cents.
For Further Aid in "Keeping Fit"....
WHAT IS A HEALTH EXAMINATION ANYWAY?
By Haven Emerson. A discussion on the importance and value of periodic physical examinations of the apparently healthy. 14 pages. 10 cents.
IF I KEEP MY HEALTH
By W. W. Bauer. Tom and his friend Bill discuss speculation in health. 4 pages. 5 cents.
THAT ANNUAL CHECK-UP
By A. H. Aaron. 4 pages. 10 cents.
American Medical Ass'n., 535 N. Dearborn St., Chicago

Now Only 25¢
Was $3.00


Pocket-size edition, 6½ x 4¼ inches; 192 pages.
Here is a book for every bride and groom, every husband and wife. Dr. Stopes takes up each of the many problems that are bound to arise in every marriage. She writes directly, clearly, concretely, explaining step by step every procedure in proper marital conduct. This pocket-size edition has exactly the same contents as the regular edition which sold for $3.00.
Be sure to secure this famous book now for only 25c plus 10c for postage and handling.
CLIP THE COUPON AND MAIL IT WITH YOUR REMITTANCE TODAY.
Eugenics Publishing Co., Inc.
Dept. M-616, 372 W. 35th St., N. Y. C.
Enclosed is 25c plus 10c for packing and delivery charges for which send me in plain wrapper, the pocket-size edition of "Married Love."
Name.....Age.....
Address.....
City.....State.....

Nail Care

(*Continued from page 355*)

applications do not conform to any one type of formula or recipe. Each manufacturer determines his own formula, largely dependent on the type of material available to him. Competition, supply and demand, individual initiative, advertising technic and consumer acceptance determine in great measure the cosmetic nail lacquer application you have bought and are applying.

What has been said about nail lacquer materials should influence you against attempting to mix nail lacquer cosmetics from two manufacturers and to apply the mixture on your finger nails. The same admonition applies against mixing various products from the same manufacturer. Another practical point to be gleaned from the description of the processes of manufacture is the selection of the nail lacquer remover. The solvent formerly utilized was amyl acetate, known colloquially as banana oil. The most recent formulation of nail lacquer is not dependent on amyl acetate. Lacquers no longer have the odor of banana oil. Incidentally, should you find yourself without the nail polish remover required by the nail polish already on your nails, you may try the application of more of the nail polish and remove it before it has the opportunty to dry. In theory at least, a fresh application of the same nail polish will facilitate the removal of the hardened, dry application already on the nail.

Although the coloration of the nail is most obvious, nail care requires more than applications of vivid color. The cosmetic shape of the nail depends on the need of the person. A woman cannot expect to make her living banging the keys of a typewriter with the elongated talons of her society sister whose greatest physical effort is placing the key into the ignition switch of her automobile, although one progressive typewriter company has changed the shape of the key from round to oval to accommodate typists who have long nails. Practical business and social usage certainly clash over typewriter keys!

Some practical points in the physiology of the nail may be useful to know. Nail growth depends on the deposition of horny cells at the base of the nail, where the half moon is visible. The free edge of the nail may be cut with impunity. The nail continues to grow from the matrix at the half moon. The nail grows about $\frac{1}{32}$ of an inch a week. It takes about eight months for the nail to grow an inch. A major injury to the nail matrix near the half moon results in permanent malformation of the nail growing from the matrix. The result of an injury to the nail surface ultimately disappears as the nail grows and the injured part reaching the free edge of the nail is removed. The thickness of the nail is determined by the breadth and width of the half moon. Glance at your nail now and notice how broad the half moon of the thumb is compared to the half moon, if visible at all, of the fifth finger. Feel your nail at the free edge. Note how much thicker the nail of the thumb is than the nail of the fifth finger.

It is impossible to nourish the nail by any application to its surface. The appearance of the surface of the nail may be altered by physical or chemical means. The result is always temporary, as the nail continues to grow. Malformations or distortions of the nail surface due to injury of the matrix of the nail can be removed or camouflaged by applications to the surface. Discoloration of the nail occurs occasionally by deposits of darker material in the depth of the nail. The cause is rarely determined. Changes in the color of the nail tending toward extreme whiteness either of the total nail, of linear streaks crosswise, of linear streaks lengthwise or of white spots on the nail are common. The cause of these is also unknown. They are supposed by many to be due to enclosures of air within the forming nail. Another supposition is based on injuries to the growing nail by rough handling of manicure instruments at the cuticle.

Hang nails are caused by poor manicuring. Remnants of nail at the corner, where the side of the nail reaches the tip, result in the accumulation of blood, serum and ultimately pus. Proper manicuring and extreme carefulness in treating the corner act to prevent hang nails. Ingrown nails rarely occur on the hands. They are associated with pedicure, or care of the nails of the feet. The free edge of the nail hangs over the tip of the finger. The horn cells of the cuticle accumulate under the free edge of the nail and give the appearance to the nail of accretions of dirt. Removal of this accumulation of horn cells should be accomplished by a blunt rather than a sharp instrument. Application of nail white under the free edge of the nail was once popular; this is no longer essential among women—instead the nail color is applied to the under surface of the nail at the free edge.

The question has often been asked whether or not nails "breathe." This is usually a preliminary question to one regarding the effect of nail lacquers on such breathing. The nail does not breathe. Others are interested in splitting of the free edge of the nails. Since the nail structure is formed through the deposit of specialized horn cells at the nail matrix located under the half moon, splitting of the nail at its free edge indicates a dissolution, loosening or solution of the binding material. Splitting of the free edge of the nails may be compared to splitting of the free ends of the hair. The reason for either is not definitely known. The remedy from the cosmetic point of view is the same for both: cutting the edge of the nail as far as possible behind the splitting. This may be a preventive procedure as well as a curative one. Whether or not diet influences the nail deposit sufficiently to be held responsible for splitting of the free edge of the nail is likewise unconfirmed. According to some authorities, the deposit of horny cells at the matrix is incomplete due to lack of calcium in the diet, lack of the urge to deposit calcium, or lack of calcium in a form suitable for absorption and later deposition.

Immersion of the hands in soap and water affects the nails of different people differently. Soap suds harmless to one person may harm the nails of another. Protection of the nail and of the hand is required in industries dealing with solvents. Some people are adversely affected by simple solutions, such as fruit juices, during the canning season. Each person must in time learn the types of solvents, washes or soaps having an adverse effect on his or her nails. Protection by gloves is often given in commercial and industrial plants. The same protection may be excellent at home.

Historically, the nails have been utilized by physicians in the past as a means of diagnosis of general disease. Certain phases of heart disease, for example, and changes in the pulmonary system may be suspected by the appearance of the nails. Minute examination of the blood vessels near the nail has been utilized by specialists with equipment designed for this purpose. An examination of the terminal blood vessels close to the cuticle has determined the presence or absence of certain diseases within the general system. The color of the nail is determined by the thickness of the deposited horny cells and the vascularity of the underlying blood bed. Pressure against the nail fades the pink. Injury to the blood bed, as when the fingertips are caught in a closing door, results in hemorrhage under the nail. If the blood is not removed at once by an incision or puncture through the surface of the nail, the accumulated pigments give a black area visible through the surface of the nail. The black area may be permanent.

Ringworm of the nail accompanies ringworm of the skin between the toes and in the space between toes and soles. The toenails are often afflicted with ringworm. Occasionally, the nails of the hand are also infested with the parasite of ringworm. The appearance of such a nail gives the observing physician a clue, through discoloration, crumbling and ridge formation. The fungus lodges in the depth of the nail and in the structures about the nail. Ringworm of the nail is a chronic, persistent, recurrent disease. It is resistant to many available types of treatment; self cure is practically impossible.

PRESCRIPTIONS

Their use and misuse, by Austin E. Smith, M.D. Coming in an early issue of Hygeia.

Schools and Camps

Has your child heart trouble, asthma, diabetes, nephritis?

He may lead a normal life, grow strong and learn in the sunshine at

La Loma Feliz

SANTA BARBARA, CALIFORNIA

Ina M. Richter, Med. Dir.

John A. Robinson, Senior Master.

Schools and Camps for Exceptional Children

● TROWBRIDGE TRAINING SCHOOL ●

Home school for nervous, backward children. "*Best in the West.*" Beautiful buildings. Spacious grounds. Experienced teachers. Individual supervision. Resident physician. Enrolment limited. Endorsed by physicians, educators. Booklet E. Haydn Trowbridge, M.D., 1810 Bryant Bldg., Kansas City, Mo.

Beverly Farm, Inc. Home and school for nervous and backward children and adults. Successful social and educational adjustments. Occupational therapy. Dept. for birth injury cases. Healthfully situated on 220-acre tract, 1 hr. from St. Louis. 7 well-equipped buildings, gymnasium. 45th year. Catalog. Groves Blake Smith, M.D., Supt., Box H, Godfrey, Ill.

The Mary E. Pogue School Social & Educational Adjustment for exceptional children all ages. Visit the school specializing in work leading to more normal living. Beautiful grounds. Home atmosphere. Separate buildings for boys and girls. Catalog. 80 Geneva Road, Wheaton (Near Chicago), Ill.

SEX EDUCATION BOOKLETS

By Thurman B. Rice, M.D.

★ THOSE FIRST SEX QUESTIONS

For parents of little children. Wholesome home life, character training and accurate answers to first sex questions are fundamental.

★ THE STORY OF LIFE

For boys and girls, ten years of age, telling them how the young come to plants, animals, and human parents.

★ IN TRAINING

For boys of high school age, interpreting their adolescent development in terms of athletic and other achievements.

★ HOW LIFE GOES ON

For girls of high school age. Their role as mothers of the men of tomorrow.

★ THE AGE OF ROMANCE

For young men and women, dealing with the problem as a unit for both sexes.

25c a Copy

Set of 5 in file case $1.00

AMERICAN MEDICAL ASS'N, 531 N. Dearborn, Chicago

INDEX
HYGEIA
ADVERTISEMENTS

American Institute of Baking 371
American Meat Institute 365
Armand Company 388
Artra Cosmetics (Sutra) 367
Better Vision Institute ..... 2nd Cover
Beverly Farm, Inc. 399
Burroughs Wellcome & Company 389
Camp, S. H., & Company 373
Carter Products, Inc. (Arrid) 382
Church & Dwight Company, Inc. (Arm & Hammer and Cow Brand Baking Soda 366
Davidson Rubber Company 397
Devereux Foundation 375
Duke Laboratories, Inc. 398
Emerson Books, Inc. 375
Eugenics Publishing Company 398
Factor, Max, & Company 383
Fort Massac Chair Co. 395
General Foods Corporation
Post's 40% Bran Flakes 368
Postum 370
General Mills, Inc. ..... 3rd Cover
Guild of Presc. Opticians of Amer., Inc. 380-381
Hawaiian Pineapple Co., Ltd. 330
Hynson, Westcott & Dunning ..... Back Cover
Kroll Brothers Company 328
La Loma Feliz 399
Luziers, Inc. 385
Maiden Form Brassiere Co. 397
Marcelle Hypo-Allergenic Cosmetics 326
Mead Johnson & Company 321
Metropolitan Life Insur. Co. 362
National Dairy Council 329
National Dairy Products Corporation (Sealtest Milk) 361
Nonspi Company 390
Num Specialty Co. (Thum) 394
Otarion, Inc. 392
Owens-Illinois Glass Co. (Pyrex Nursing Bottles) 394
Parke, Davis & Company 327
Pharma-Craft Corporation, Inc. (Fresh Deodorant) 377
Phillips, Dr. P., Canning Company 374
Pogue, Mary E., School 399
Procter & Gamble Company (Ivory) 333
Pyramid Rubber Company (Evenflo Nurser) 395
Roberts, Johnson & Rand Shoe Co. (Poll Parrot Shoes) 386
Sanit All Products Corp (Baby-All Natural Nurser) 395
Sharp & Dohme 331
Sheridan House 374
Soft-Lite Lens Company, Inc. 325
Spirella Company, Inc. 391
Squibb, E. R., & Sons 323
Stone-Tarlow Company ("Elevators" Shoes) 372
Sun-Rayed Company 374
Tampax Incorporated 387
Tre-Zur Brassiere Company 390
Trowbridge Training School 399
Upjohn Company 369
Vacolite Company 382
Van Camp Sea Food Co., Inc. (Tuna) 374
Venus Corporation 392

Medical News
OF THE MONTH

Fine Record of Army Medical Department

Concluding an editorial summarizing the laudable accomplishments of the Medical Department of the United States Army since Dec. 7, 1941, a recent issue of *The Journal of the American Medical Association* says:

"The information here made available should be comforting to the American fathers and mothers who have given their sons to the defense of our nation. It is information which should be spread widely so that it may reach the millions of homes in which it will answer questions that have been raised again and again in the family councils. Indeed, if there has been any one obvious deficiency it has been the failure of the Public Relations Division of the United States Army to provide the information that the people want regarding the health of our army, week by week, month by month. Let the people know about the hospitals that have been provided; let them hear about the quality of the physicians enrolled and the medical service that they render; tell about our magnificent record in the treatment of burns and wounds and in the control of malaria; tell of the training programs for thousands of surgical, laboratory, x-ray and other technicians. What about some of the research projects in which the Army has cooperated with the Navy and the Committee on Medical Research? The record is one in which we may all take pride; the public that we serve needs to hear of its accomplishments."

Gonorrhea Prevention

From results obtained in an experimental group of soldiers, sulfathiazole administered by mouth appears to be an effective preventive against gonorrhea and chancroid, Capt. James A. Loveless and Col. William Denton, Medical Corps, Army of the United States, declare in *The Journal of the American Medical Association* in a preliminary report of their investigation.

"Its administration in this experimental group," the two men say, "has not been attended by serious reactions."

The test group in the study consisted of a company of approximately 1,400 Negroes and the control group of approximately 4,000 Negro troops from the same post. In summarizing their report the authors say that "A company of approximately 1,400 Negro troops was given sulfathiazole prophylaxis of 2 Gm. before leaving the fort on pass. Those taking station prophylaxis received no further drug. All others received 4 additional Gm., 2 on returning to the post and 2 the next morning.

"In this company there has occurred a phenomenal disappearance of gonorrhea and chancroid. Excluding the 'failures' not under the influence of the drug at the time of exposure, the gonorrhea rate dropped to a level of 8 per thousand yearly as compared with 171 per thousand in the control group."

No Known Method of Correcting Color Blindness

Despite unsubstantiated claims to the contrary, methods of correcting color blindness are unknown, *The Journal of the American Medical Association* warns in a recent issue, pointing out that "Many letters sent to the headquarters of the American Medical Association indicate that men who have had difficulty in gaining entrance to the navy or the air force have been given false hopes by . . . wholly unwarranted publicity."